Service Manual

75SR1041/2A/2M
SR1041FG, TB
Stereo receiver

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Please use this service manual with referring to the user guide (D.F.U.) without fail.
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

marantz®

model SR1041

PCS 89 086

4822 725 51146
First issue : 1997. 08
286J855010 AO

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following infomation must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

USA

MARANTZ AMERICA, INC.
440 MEDINAH ROAD
ROSELLE, ILLINOIS 60172-2330
USA
PHONE : 630 - 307 - 3100
FAX : 630 - 307 - 2687

CANADA

LENBROOK INDUSTRIES LIMITED
633 GRANITE COURT,
PICKERING, ONTARIO L1W 3K1
CANADA
PHONE : 416 - 831 - 6333
FAX : 416 - 831 - 6936

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THE NETHERLANDS
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FAX : +31 - 40 - 2735578

PROFESSIONAL **USA**

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MARANTZ PROFESSIONAL PRODUCTS
1000 CORPORATE BLVD., SUITE D
AURORA, ILLINOIS 60504 USA
PHONE : 630 - 820 - 4800
FAX : 630 - 820 - 8103

PROFESSIONAL **CANADA**

TC ELECTRONICS CANADA LTD
540 FIRING AVE.
BAIE D'URFE, QUEBEC H9X 3T2
CANADA
PHONE : 514 - 457 - 4044
FAX : 514 - 457 - 5524

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BRAZIL

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CEP 04698-970
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PHONE : 0800 - 123123(Discagem Direta Gratuita)
FAX : +55 11 534. 8988

THAILAND

MRZ STANDARD CO,,LTD
746 - 750 WANGBURAPA BANGKOK
10200 THAILAND
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FAX : +66 2225 8871

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FORWARD INTERNATIONA CORP. LTD.
15 TH FLOOR, REGENT CENTRE,
88 QUEEN'S ROAD, CENTRAL, H. K,
PHONE : +852 521 - 0883
FAX : +852 521 - 7835

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PAI- YUING CO,, LTD.
6 TH FL NO, 148 SUNG KIANG ROAD,
TAIPEI, 10429, TAIWAN R.O.C.
PHONE : +886 (2) 5221304 - 8
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WO KEE HONG ELECTRONICS SDN. BHD.
NO. 102 JALAN SS 21/35, DAMANSARA
UTAMA, 47400 PETALING JAYA
SELANGOR DARUL EHSAN,
MA LAYS IA
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Sagamihara - shi, Kanagawa
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営業本部 〒150
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SINGAPORE

FORWARD MARKETING (SINGAPORE) PTE. LTD.
29, LENG KEE ROAD
SINGAPORE 159099,
PHONE : +65 475 - 4555
FAX : +65 475 - 8623

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard NO. 1492.

In case os difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. TECHNICAL SPECIFICATIONS

FM TUNER SECTION

Frequency range	F version	76 - 90.0 MHz
	/2A/2M version	87.5 - 108 MHz
Sensitivity DIN (Mono / Stereo)		1.0 / 25 µV
S / N (Mono / Stereo)		76 / 68 dB
T.H.D.		0.3 / 0.6 %
Selectivity at 98 MHz (±300 kHz)		60 dB

AM TUNER SECTION

Frequency range	531 - 1602 kHz
Sensitivity DIN (S / N 20 dB 30% Mod. 999 kHz)	500 µV
S / N at 999 kHz	50 dB

LW TUNER SECTION

Frequency range	152 - 282 kHz
Sensitivity DIN (S / N 20 dB 30% Mod. 207 kHz)	1500 µV

AMPLIFIER SECTION

Power output	DIN 8 Ω	50 W
	RMS 8 Ω	45 W
IHF Dynamic power 8 Ω / 4 Ω / 2 Ω		64 W / 85 W / 92 W
T.H.D. at 8 Ω rated RMS output		0.05 %
Damping factor		100
Input sensitivity	: CD, TAPE1, TAPE2 / MD, AUX	220 mV / 40 kΩ
S / N (IFH-A)	: CD, TAPE1, TAPE2 / MD, AUX	80 dB
POWER REQUIREMENTS		
	F version	100 V AC, 50 / 60 Hz
	/02A/02M	230 V AC, 50Hz

DIMENSIONS

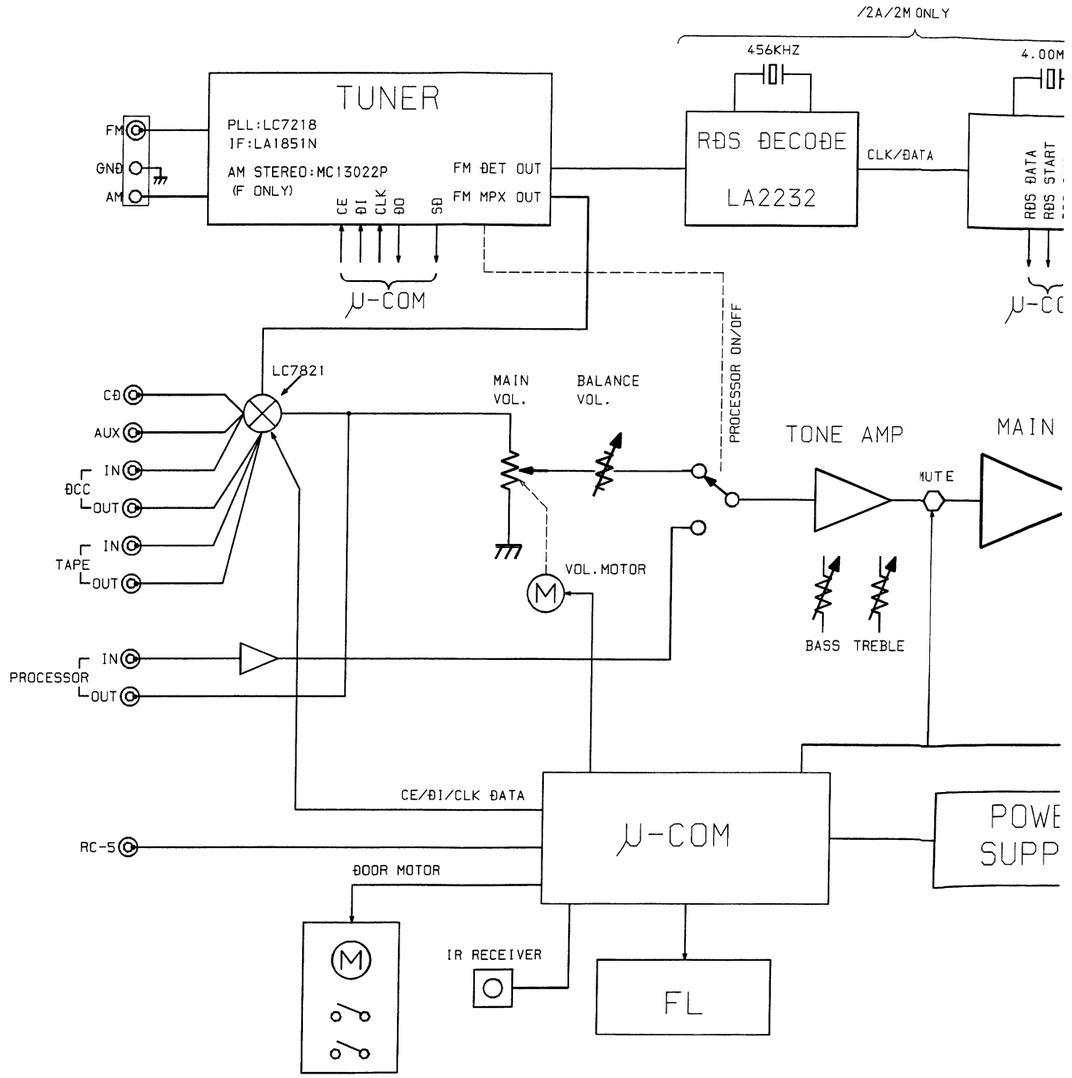
Width	422 mm
Height	76 mm
Depth	334 mm
WEIGHT	6.5 kg

SUPPLIED ACCCESSORIES

Remote controller (RC1041SR) x 1
CR2032 LITHIUM Battery x 1
FM antenna x 1
AM loop antenna x 1

Specifications subject to change without prior notice.

2. BLOCK DIAGRAM



- 90.0 MHz
5 - 108 MHz
1.0 / 25 µV
.76 / 68 dB
0.3 / 0.6 %
..... 60 dB

- 1602 kHz
..... 500 µV
..... 50 dB

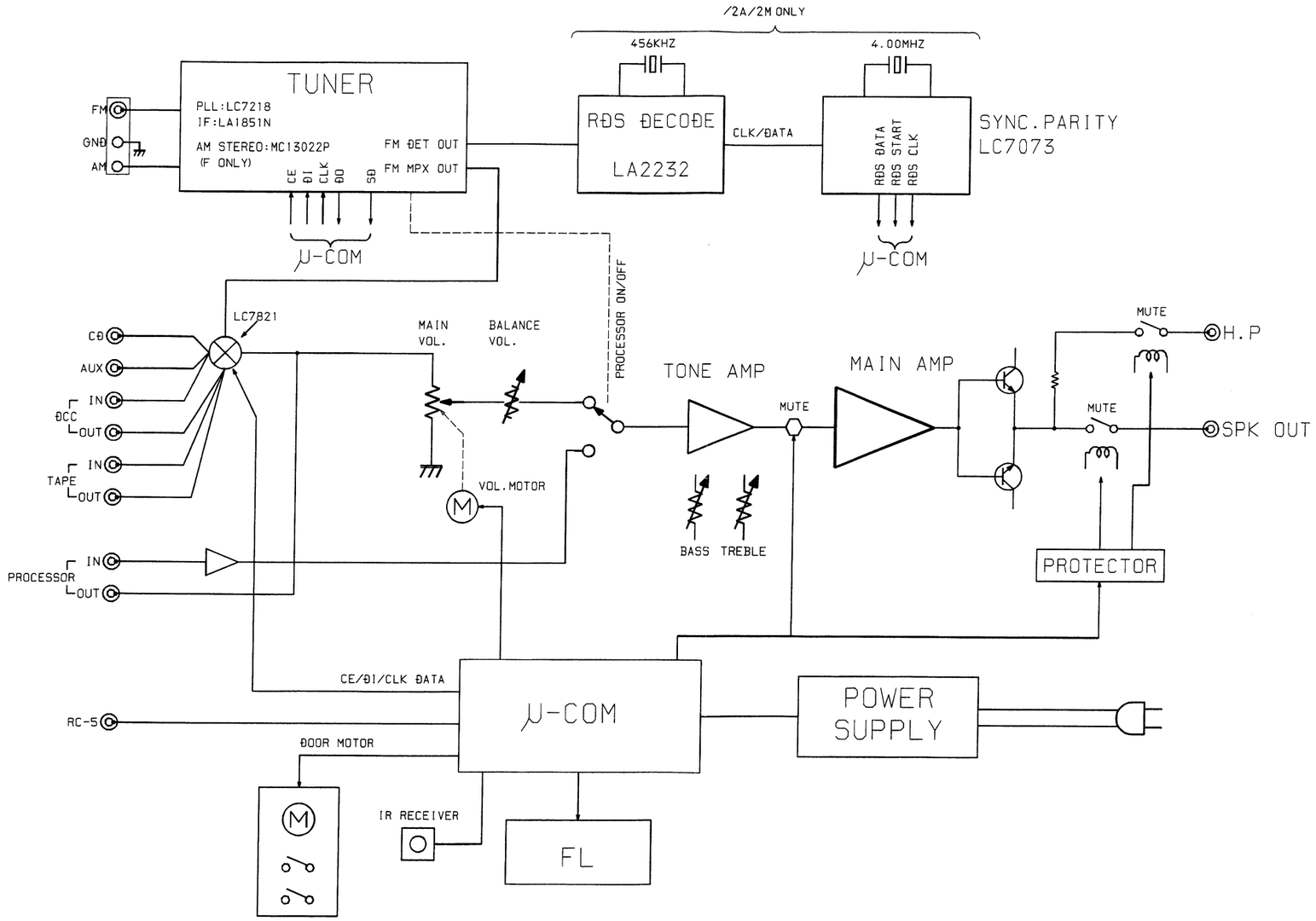
2 - 282 kHz
.... 1500 µV

.....50 W
.....45 W
5 W / 92 W
..... 0.05 %
..... 100
mV / 40 kΩ
..... 80 dB

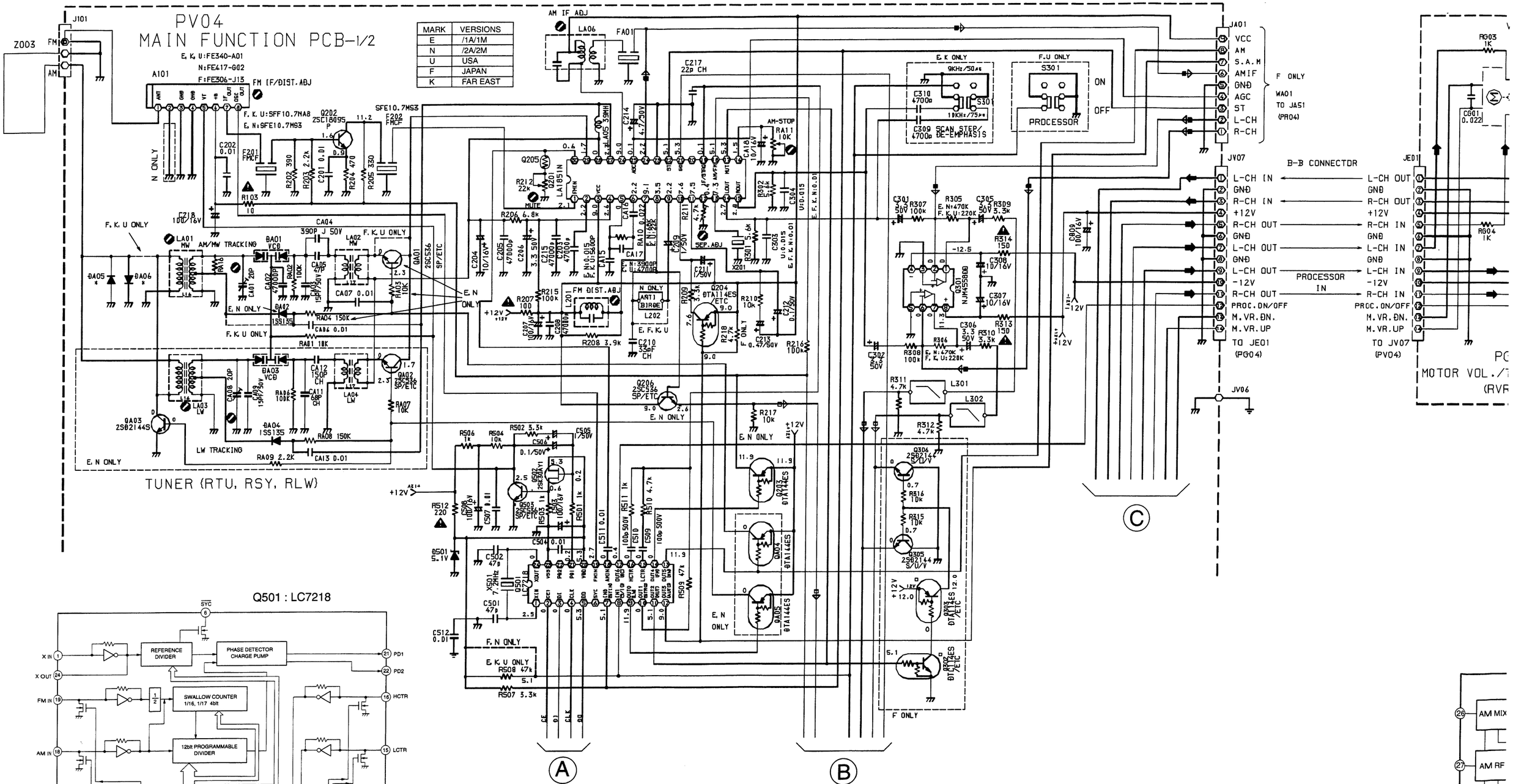
50 / 60 Hz
V AC, 50Hz

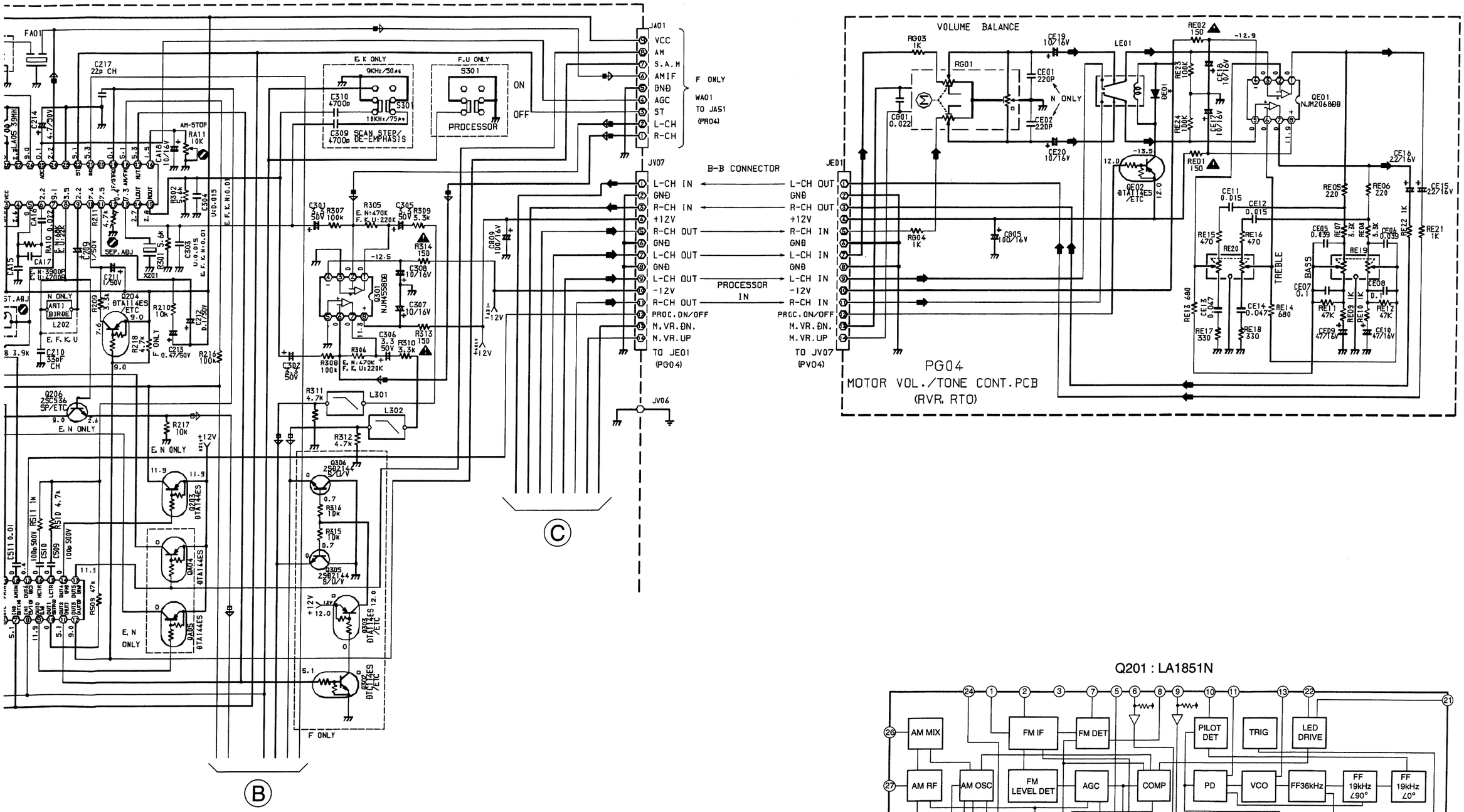
.... 422 mm
..... 76 mm
.... 334 mm
..... 6.5 kg

2. BLOCK DIAGRAM



3. SCHEMATIC DIAGRAM AND PARTS LOCATION (Pattern side)





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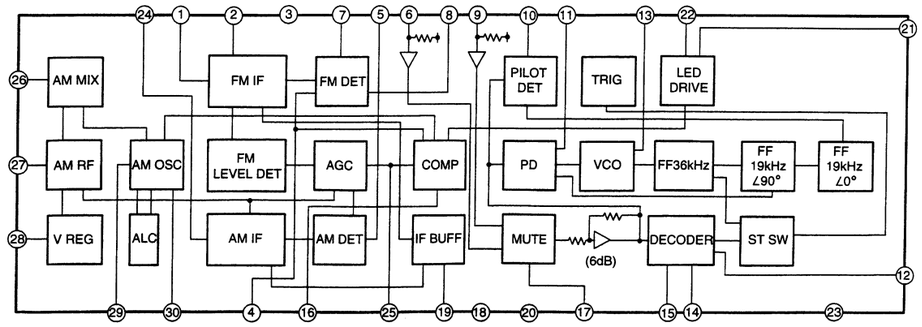


QA03 QA01 QA02
Q502 Q503 Q501
QD02 QA04 QA05 Q203

Q202 Q201 Q206 Q204
Q303 Q302 Q301 Q305 Q306
Q712 Q708 QN02 Q702 Q706 Q704

QV07 QV10~QV12 QV01
QV03~QV06 QV09

Q717
Q710 Q714

QN05

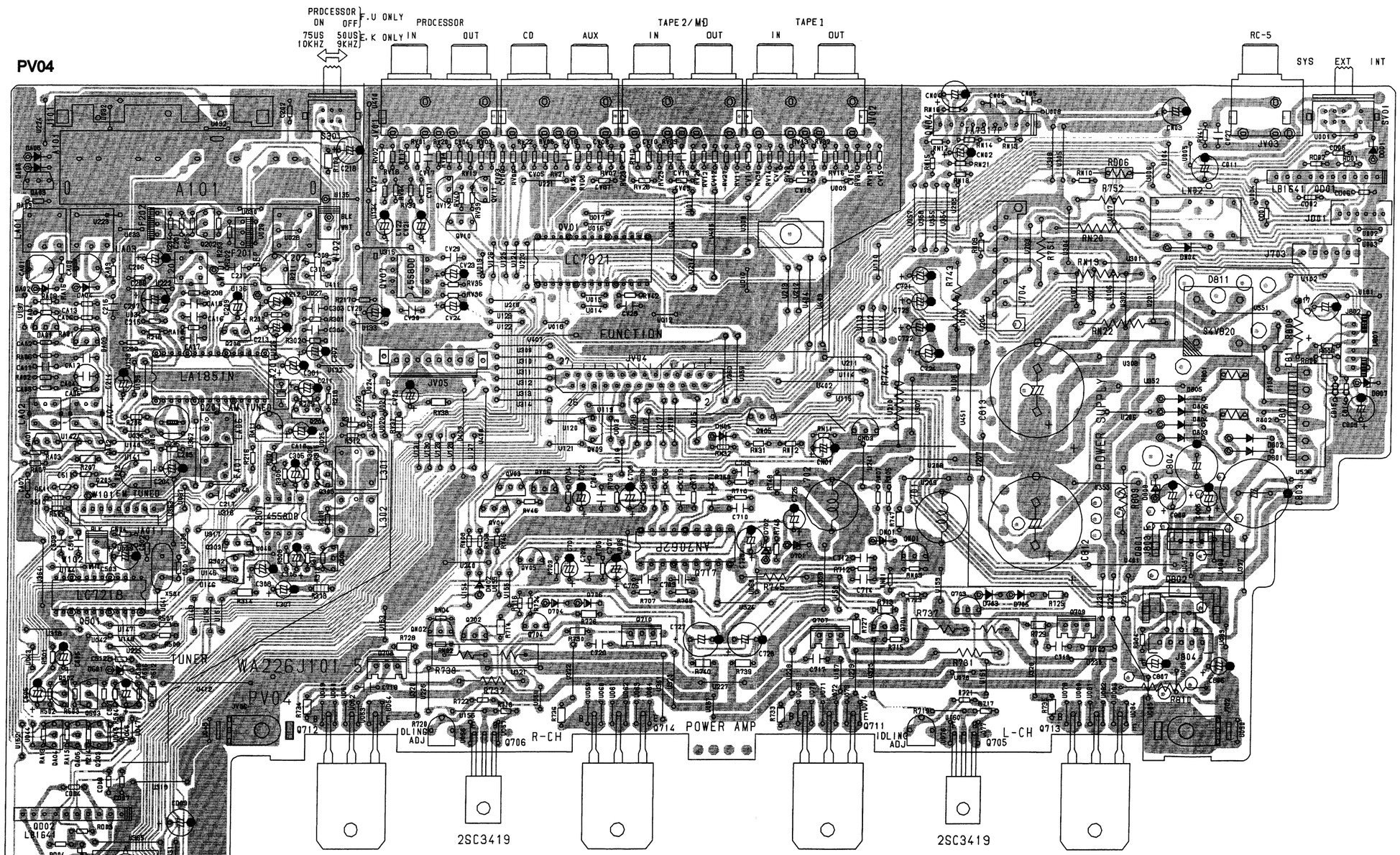
QN04
QN03 QN01
Q707 Q711 Q701 Q703 Q705

Q713 Q709

Q801
Q802

QD01

PV04



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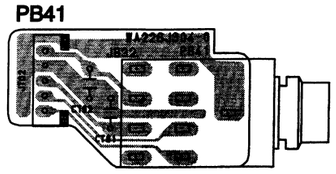

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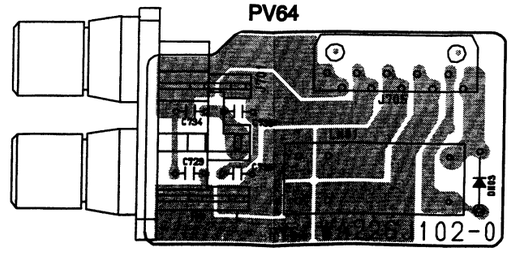
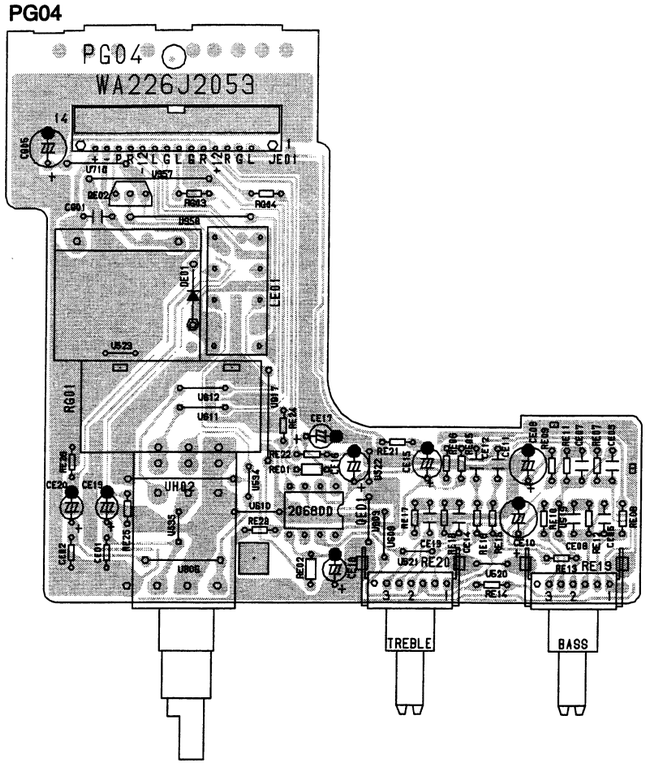


MARA-00669 / DRUCK 5

PG04



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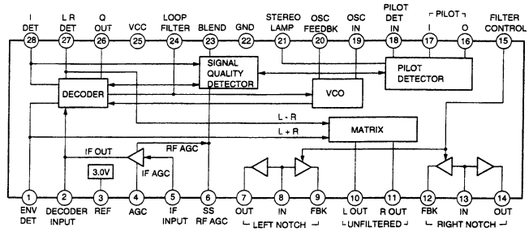

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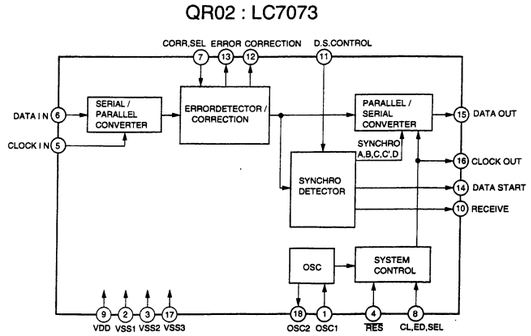

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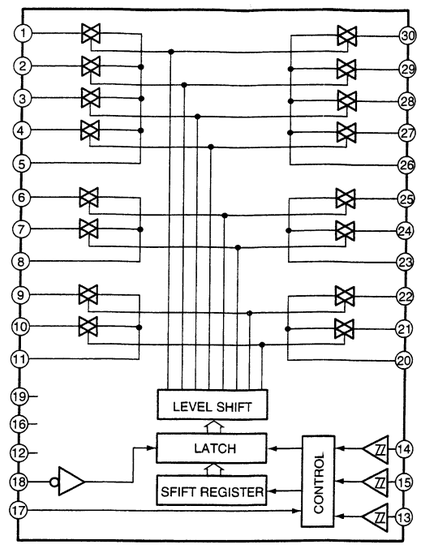

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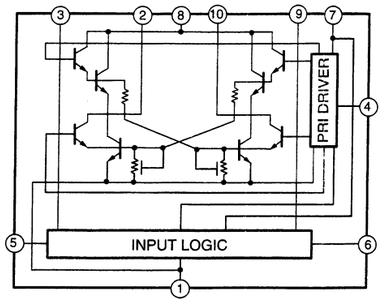

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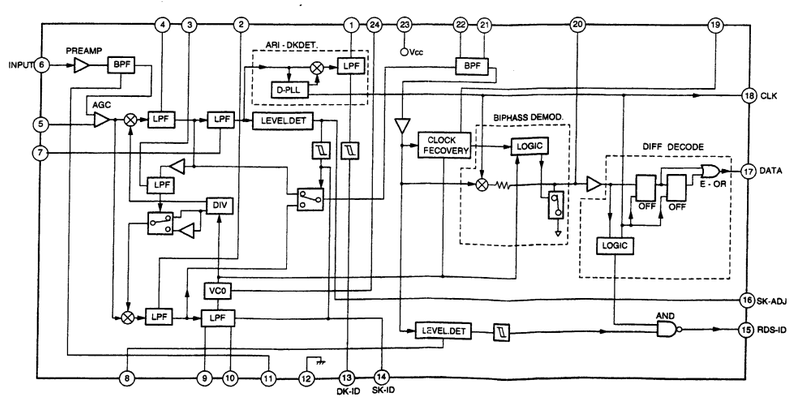

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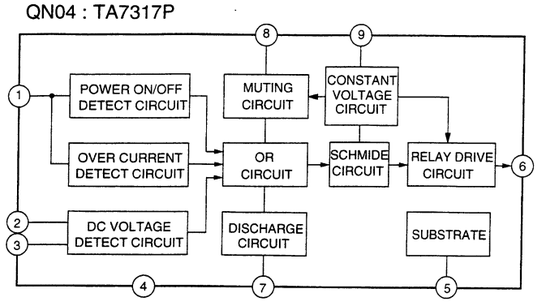

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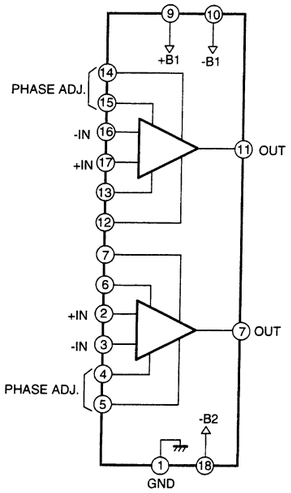

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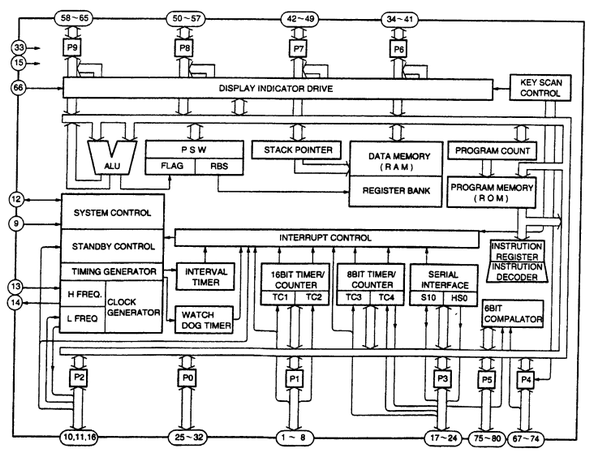


MAIN AMP

MARK	VERSIONS
E	/1A/1M
N	/2A/2M
U	USA
F	JAPAN
K	FAR EAST

CV01-CV16:N ONLY
CV29/CV30:N ONLY
RV03/RV04:N 150, ETC 100

PROCESSOR OUT IN
CD
AUX
TAPE 2/MD
TAPE 1
RC-5

(FUNCTION (RFU))

(INT/EXT SYSTEM REMOTE SW.)
INT
EXT
SYSTEM

DOOR MOTOR
LIMIT SW1
LIMIT SW2
CLOSE
OPEN

(RMO)

FUNCTION : CD
VOLUME : MINIMUM
FM FREQ. : 87.5MHZ
DOOR : CLOSE
CLOCK : SET

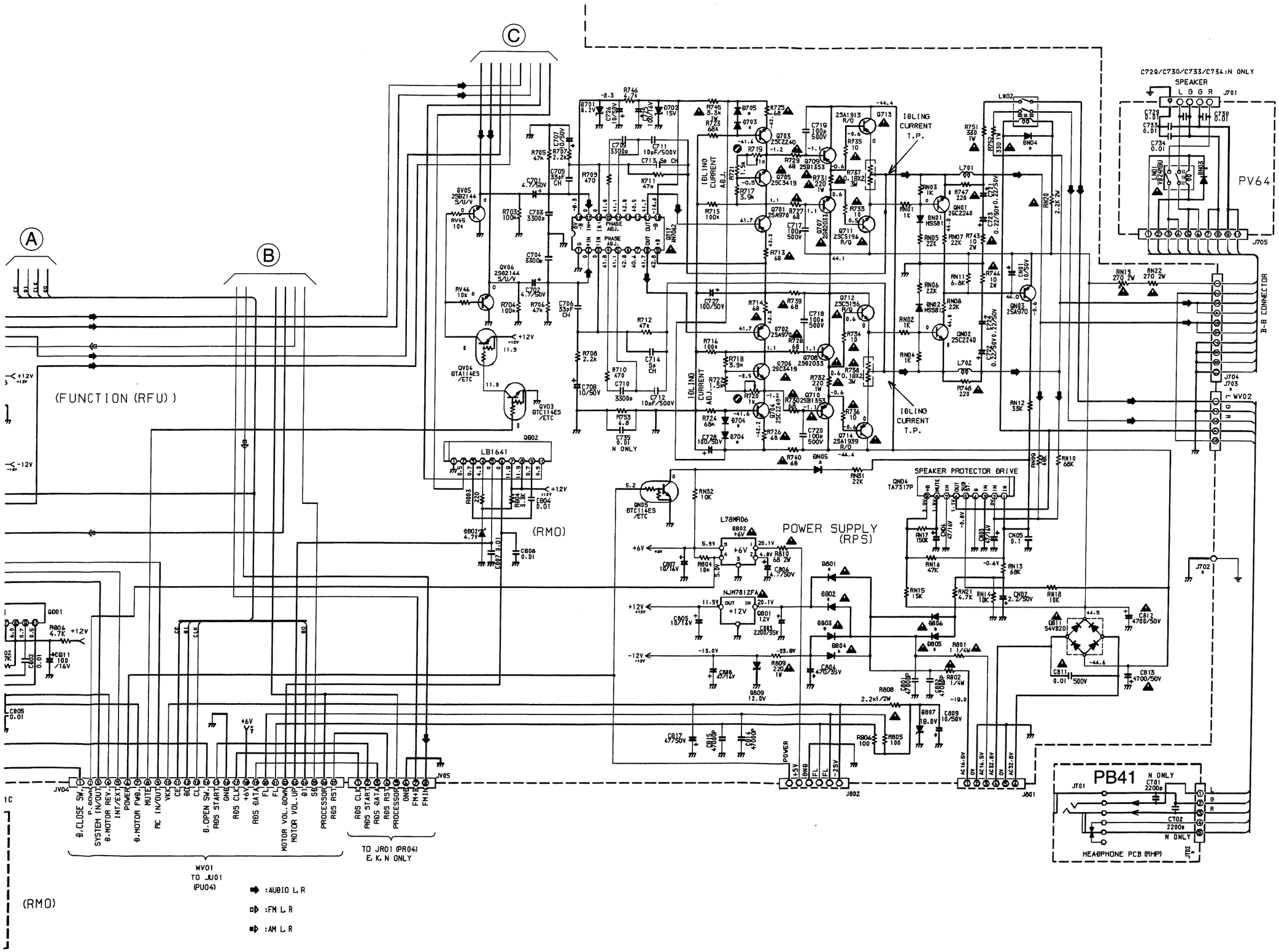
TO JR01 (PR04)
E, K, N ONLY

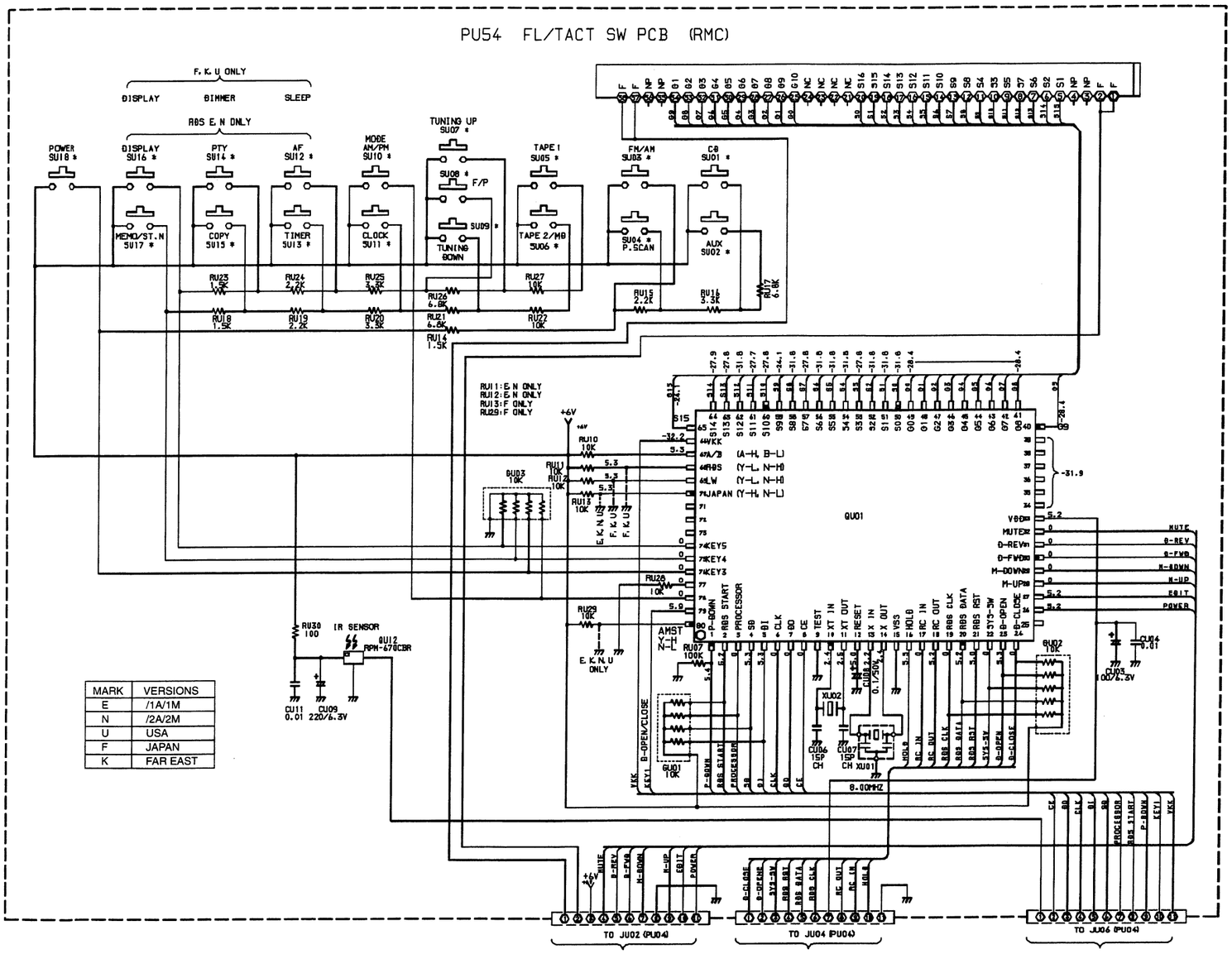
WV01
TO JU01
(PU04)

:AUDIO L, R
:FM L, R
:AM L, R

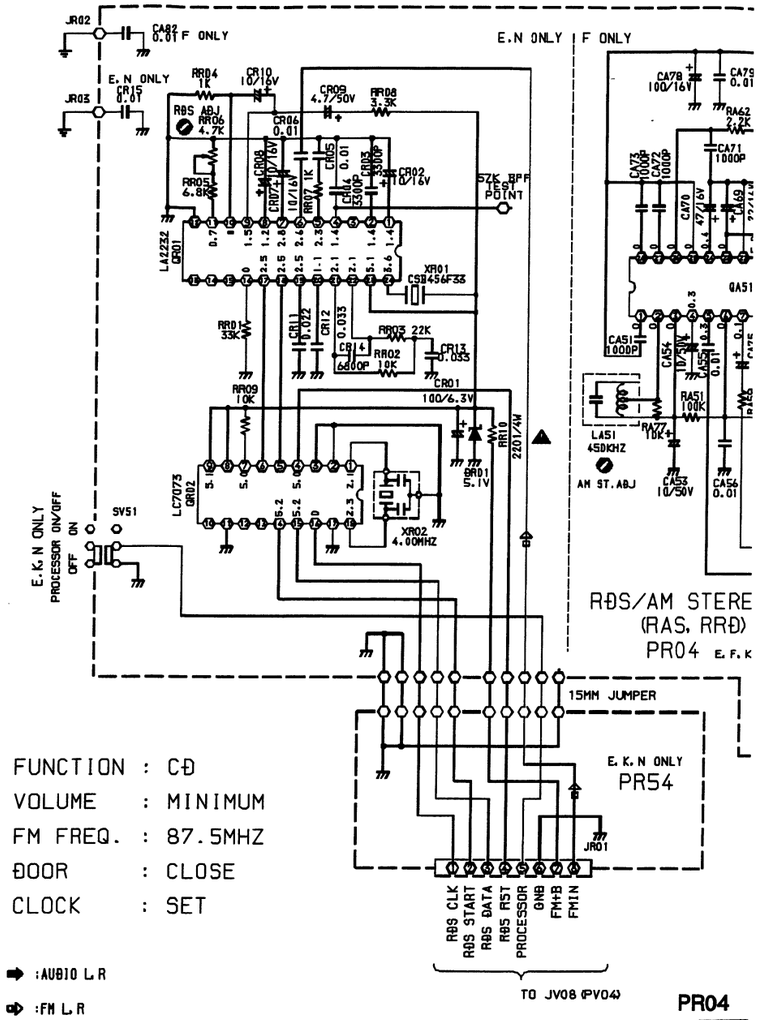
IDLING CURRENT ADJ.
PHASE ADJ.

POWER SUPPLY (RPS)


A
B
C
(FUNCTION (RFU))
(RMO)
IBLING CURRENT T.P.
IBLING CURRENT ADJ.
POWER SUPPLY (RPS)
SPEAKER PROTECTOR DRIVE
C729/C730/C733/C734:N ONLY
SPEAKER
L G G R J701
PV64
J705
B-B CONNECTOR
J704
J703
WV02
L G R
J702
LB1641
L78MRD6
NJM7812FA
QB02
QV05 2SD2144 S/U/V
QV06 2SD2144 S/U/V
QV04 BTA114ES /ETC
QV03 BTC114ES /ETC
QN05 BTC114ES /ETC
QN04 TA7317P
QN01 2SC2240
QN02 2SC2240
QN03 2SA970
QD01
JV04
JV05
J802
J801
PB41 N ONLY
JT01
HEADPHONE PCB (RHP)
JT02
CT01 2200p
CT02 2200p N ONLY
TO JR01 (PR04) E, K, N ONLY
WV01 TO JU01 (PU04)
:AUDIO L, R
:FM L, R
:AM L, R
B.CLOSE SW.
P.DOWN
SYSTEM IN/OUT
B.MOTOR REV.
INT/EXT
POWER
B.MOTOR FWD.
MUTE
AC IN/OUT
VCK
CE
DO
CL
B.OPEN SW.
RDS START
GND
RDS CLK
+6V
RDS DATA
FL
FL
MOTOR VOL. DOWN
MOTOR VOL. UP
SO
PROCESSOR
RDS RST
RDS CLK
RDS START
RDS DATA
RDS RST
PROCESSOR
GND
FM
AM
POWER
-15V
GND
FL
FL
-25V
AC16.5V
AC14.5V
AC32.8V
0V
AC32.8V



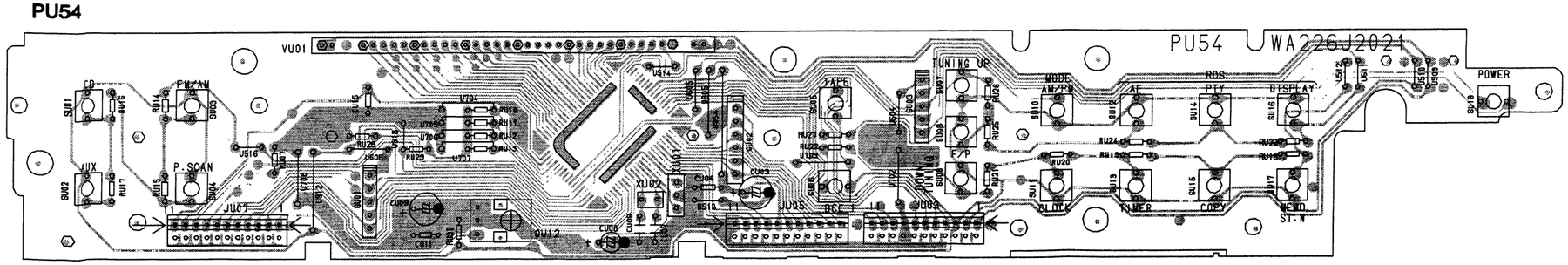
MARK	VERSIONS
E	/1A/1M
N	/2A/2M
U	USA
F	JAPAN
K	FAR EAST

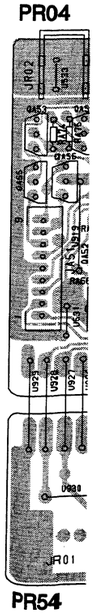


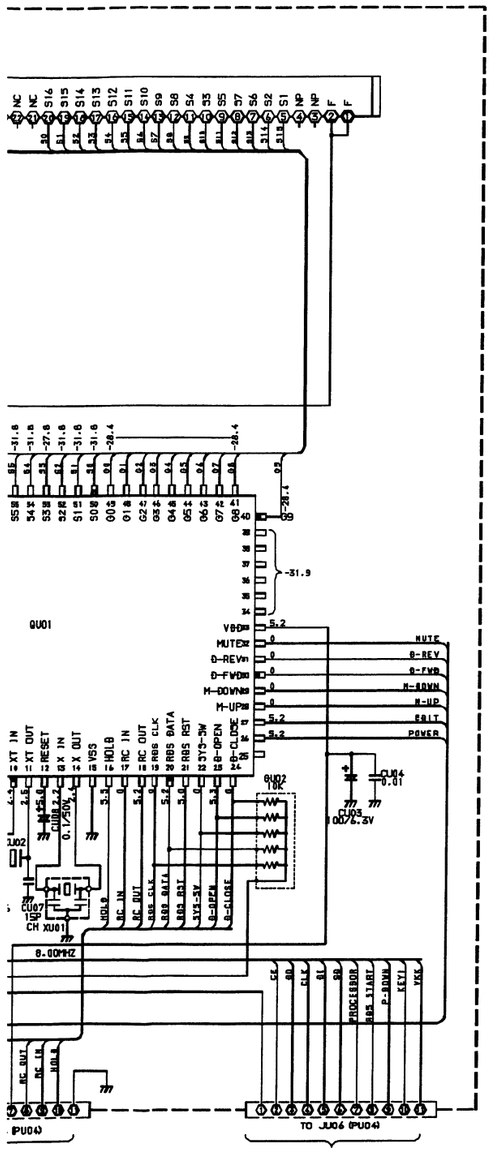
FUNCTION : CÐ
VOLUME : MINIMUM
FM FREQ. : 87.5MHZ
ÐOOR : CLOSE
CLOCK : SET

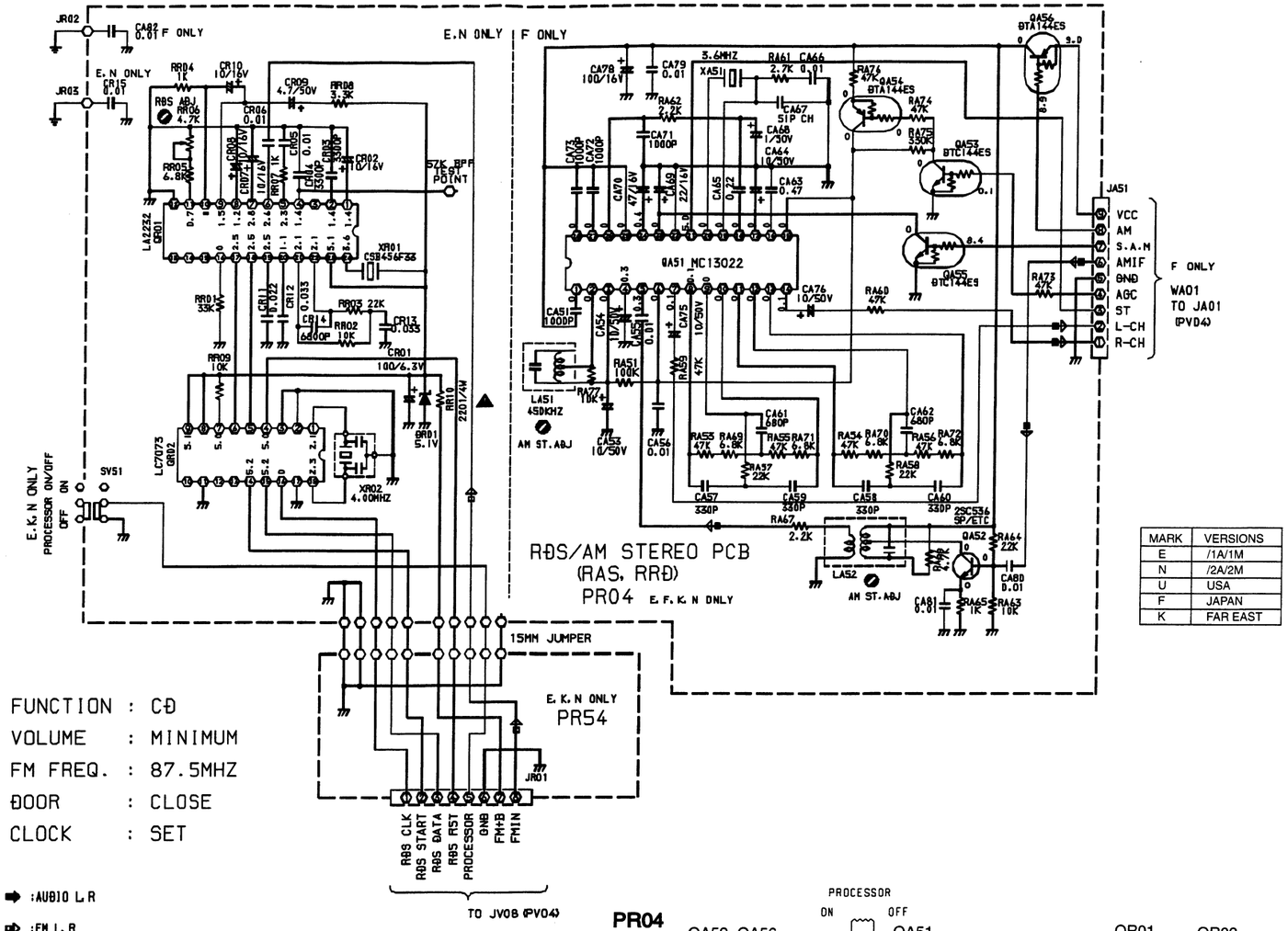
➡ :AUDIO L,R
➡ :FM L,R
➡ :AM L,R

PU54





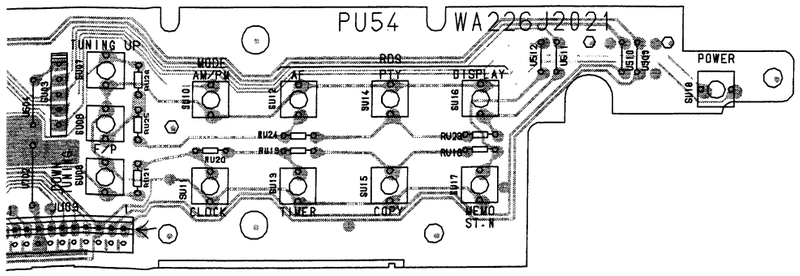


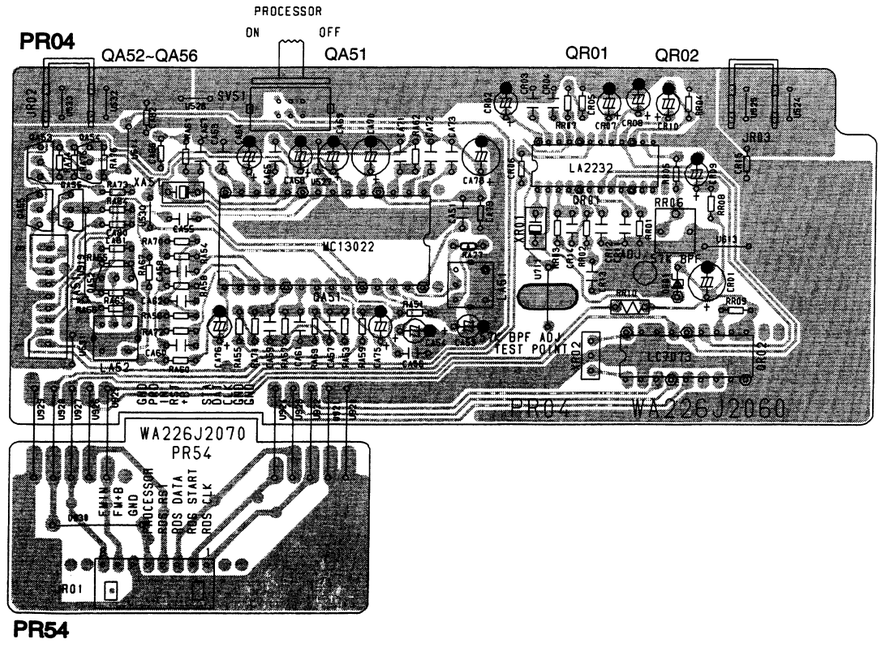


MARK	VERSIONS
E	/1A/1M
N	/2A/2M
U	USA
F	JAPAN
K	FAR EAST

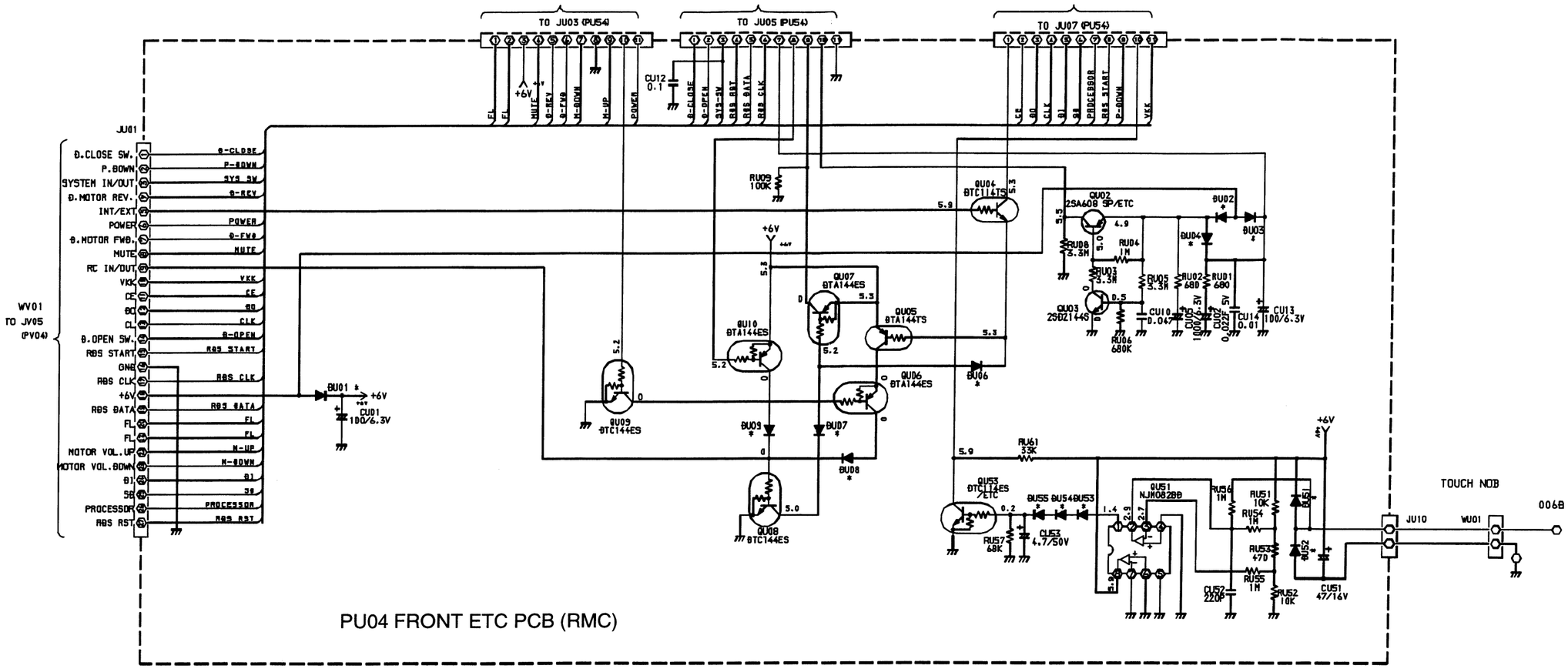
FUNCTION : CD
VOLUME : MINIMUM
FM FREQ. : 87.5MHZ
DOOR : CLOSE
CLOCK : SET

➡ :AUDIO L.R
➡ :FM L.R
➡ :AM L.R



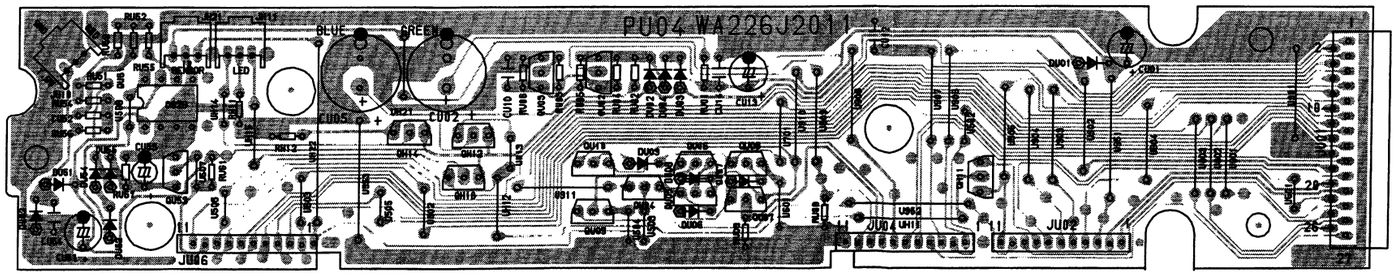


MARA-00669 / DRUCK 10

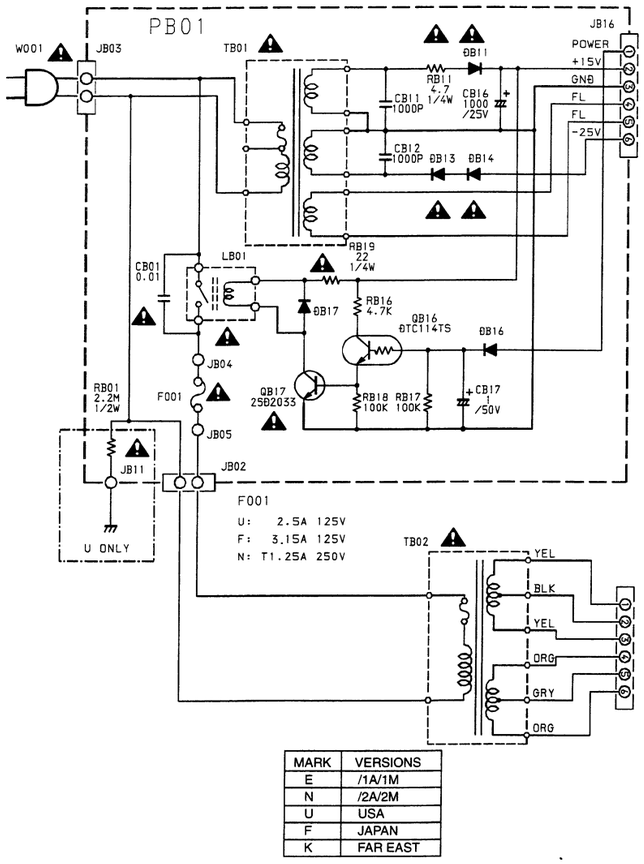


PU04 FRONT ETC PCB (RMC)

PU04 QU51 QU53 QH14 QH13 QH12 QU02~QU10 QH11

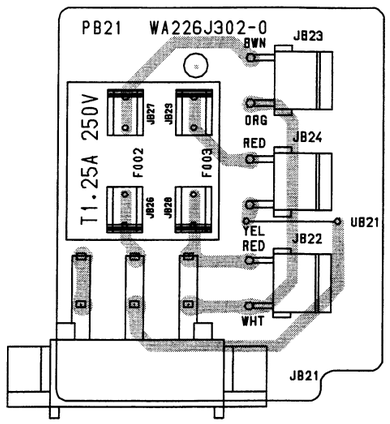


F U N VERSION

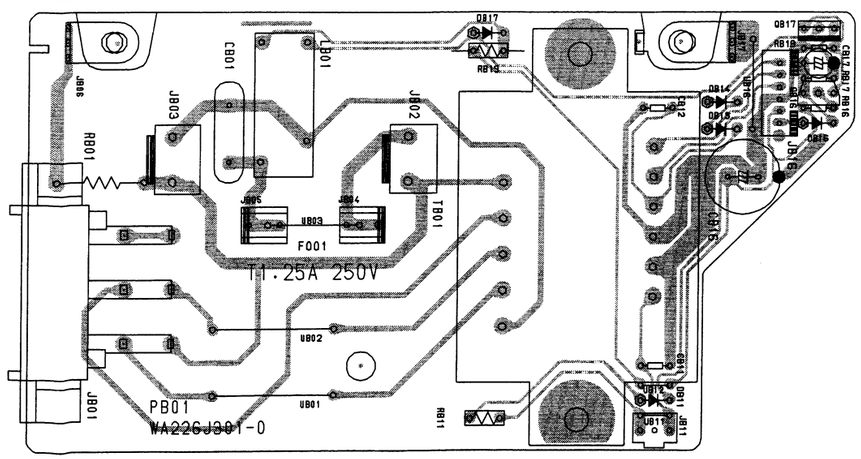


MARK	VERSIONS
E	/1A/1M
N	/2A/2M
U	USA
F	JAPAN
K	FAR EAST

PB21



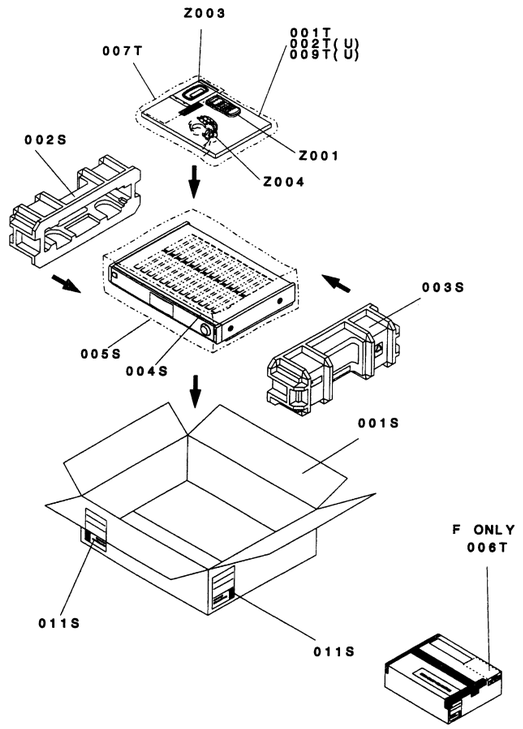
PB01



(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

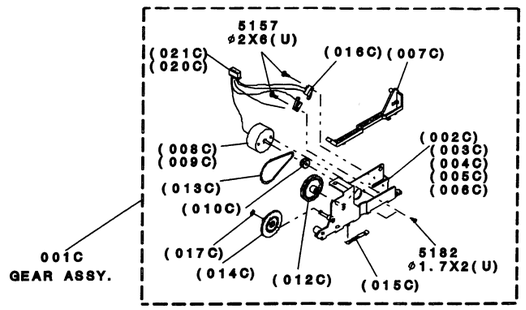
POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
001B	/2A TB	4822 426 60645	DOOR PANEL ASSY TITAN	157J063500
001B	/2M		DOOR PANEL ASSY P-BLK	157J063510
001B	FG		DOOR PANEL ASSY GRN	157J063520
002B	/2A TB	4822 466 11684	DOOR AL PANEL TITAN	157J063010
002B	/2M	4822 466 11685	DOOR AL PANEL P-BLK	157J063110
002B	FG		DOOR AL PANEL GRN	157J063210
003B		4822 450 10376	WINDOW, DOOR	446T158010
004B	/2A TB	4822 410 11416	POWER BUTTON,DOOR TITAN	446T270050
004B	/2M FG	4822 410 11413	POWER BUTTON,DOOR P-BLK	446T270150
005B	/2A TB	4822 443 10762	DOOR MOULD L TITAN	446T162010
005B	/2M FG	4822 443 10826	DOOR MOULD L P-BLK	446T162110
006B	/2A TB	4822 443 10827	DOOR MOULD R TITAN	157J162010
006B	/2M FG	4822 443 10828	DOOR MOULD R P-BLK	157J162110
007B		4822 281 50182	CONTACTOR	446T123010
008B		4822 532 40227	RETAINER	446T104010
009B		4822 462 71955	BUFFER DOOR	446T056010
011B	/2A TB		FRONT PANEL ASSY TITAN	286J248500
011B	/2M FG		FRONT PANEL ASSY P-BLK	286J248520
012B	/2A TB	4822 459 04747	FRONT PANEL TITAN	286J248010
012B	/2M FG	4822 459 04748	FRONT PANEL P-BLK	286J248110
013B	/2A TB	4822 410 11409	BUTTON BLOCK L TITAN	286J270010
013B	/2M FG	4822 410 11191	BUTTON BLOCK L P-BLK	286J270020
014B		4822 450 62123	WINDOW, FL	271K158010
015B		4822 381 11434	LENS, IR	271K355010
016B	/2A TB	4822 410 62813	BUTTON, POWER TITAN	157J270030
016B	/2M FG	4822 410 11287	BUTTON, POWER P-BLK	157J270230
017B		4822 492 33409	SPRING, POWER BUTTON	271K115010
018B		4822 526 20213	MAGNET ASSY	271K305500
021B		4822 505 11161	NUT	446T011010
022B	/2A TB	4822 410 63504	BUTTON BLOCK R TTAN	157J270060
022B	/2M FG	4822 410 11192	BUTTON BLOCK R P-BLK	157J270260
031B	/2A TB	4822 413 41818	KONB, MAIN VOLUME TITAN	157J154010
031B	/2M FG	4822 410 11162	KONB, MAIN VOLUME P-BLK	157J154110
032B	/2A TB	4822 413 31768	KNOB, TONE TITAN	157J154020
032B	/2M FG	4822 410 11163	KNOB, TONE P-BLK	157J154220
033B	/2A TB	4822 413 41819	KONB, BALANCE TITAN	157J154030
033B	/2M FG	4822 410 11164	KONB, BALANCE P-BLK	157J154230
041B		4822 502 21585	SPECIAL SCREW DOOR	446T010010
042B		4822 256 92093	HOLDER FL	271K271010
043B		4822 459 11158	STICKER FL	056J122010
001C		4822 522 33389	GEAR ASSY	446T058500
007C		4822 404 21283	LEVER	446T354010
008C		4822 361 21687	D.C. MOTOR ASSY	*MM000630R
012C		4822 528 40363	PULLEY	446T262020
013C		4822 358 31264	BELT	446T264010
014C		4822 522 33388	GEAR	446T058010
015C		4822 492 33411	SPRING	446T115010
016C		4822 271 30768	MINI SWITCH LEAF	SM01011530
017C		4822 462 71954	STOPPER	204K114210
002D	/2A TB	4822 426 30156	SIDE PANEL R TITAN	157J249010
002D	/2M	4822 426 10446	SIDE PANEL R P-BLK	157J249210
002D	FG		SIDE PANEL R GRN	157J249230
003D	/2A TB	4822 426 30157	SIDE PANEL L TITAN	157J249020
003D	/2M	4822 426 10447	SIDE PANEL L P-BLK	157J249220
003D	FG		SIDE PANEL L GRN	157J249240
005D	/2A TB	4822 532 12253	SIDE BUSH R TITAN	157J259010
005D	/2M	4822 532 12809	SIDE BUSH R P-BLK	157J259210
005D	FG		SIDE BUSH R GRN	157J259230
008D	/2A TB	4822 532 12254	SIDE BUSH L TITAN	157J259020
008D	/2M	4822 532 12811	SIDE BUSH L P-BLK	157J259220
008D	FG		SIDE BUSH L GRN	157J259240
010G		4822 462 42064	LEG, FRONT	157J057110
011G		4822 462 42065	LEG, REAR	157J057120

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
902G	/2A /2M	4822 532 60948	BUSHING MAIN CORD	450H259010
902G	F		BUSHING MAIN CORD	085J259010
006K		4822 417 20168	BUSHING	306V259030
003L		4822 466 62412	POWER TRS, SHEET	157J107010
⚠TB02	/2A /2M	4822 146 10882	MAINS TRANSF. 230V	TS17805110
⚠TB02	F		MAINS TRANSF. 100V	TS17805090
⚠W001	/2A /2M	4822 321 11343	MAINS CORD	YC01800790
⚠W001	F		MAINS CORD	YC01800800
			PACKING	
001S	F		PACKING CASE	284J801010
002S	F		CUSHION L	157J809010
003S	F		CUSHION R	157J809020
001T	/2A /2M	4822 736 15694	USER MANUAL	284J851310
001T	F		USER MANUAL	285J851110
Z001		4822 219 10369	REMOTE COMMANDER	ZK286J0010
Z003		4822 157 63083	ANT COIL LOOP	LA00055010
Z004	/2A /2M		EXT. ANTENNA	ZA02800020
Z004	F		EXT. ANTENNA	ZA02000070
Z005	F		ANT ADAPTER	YP90000310



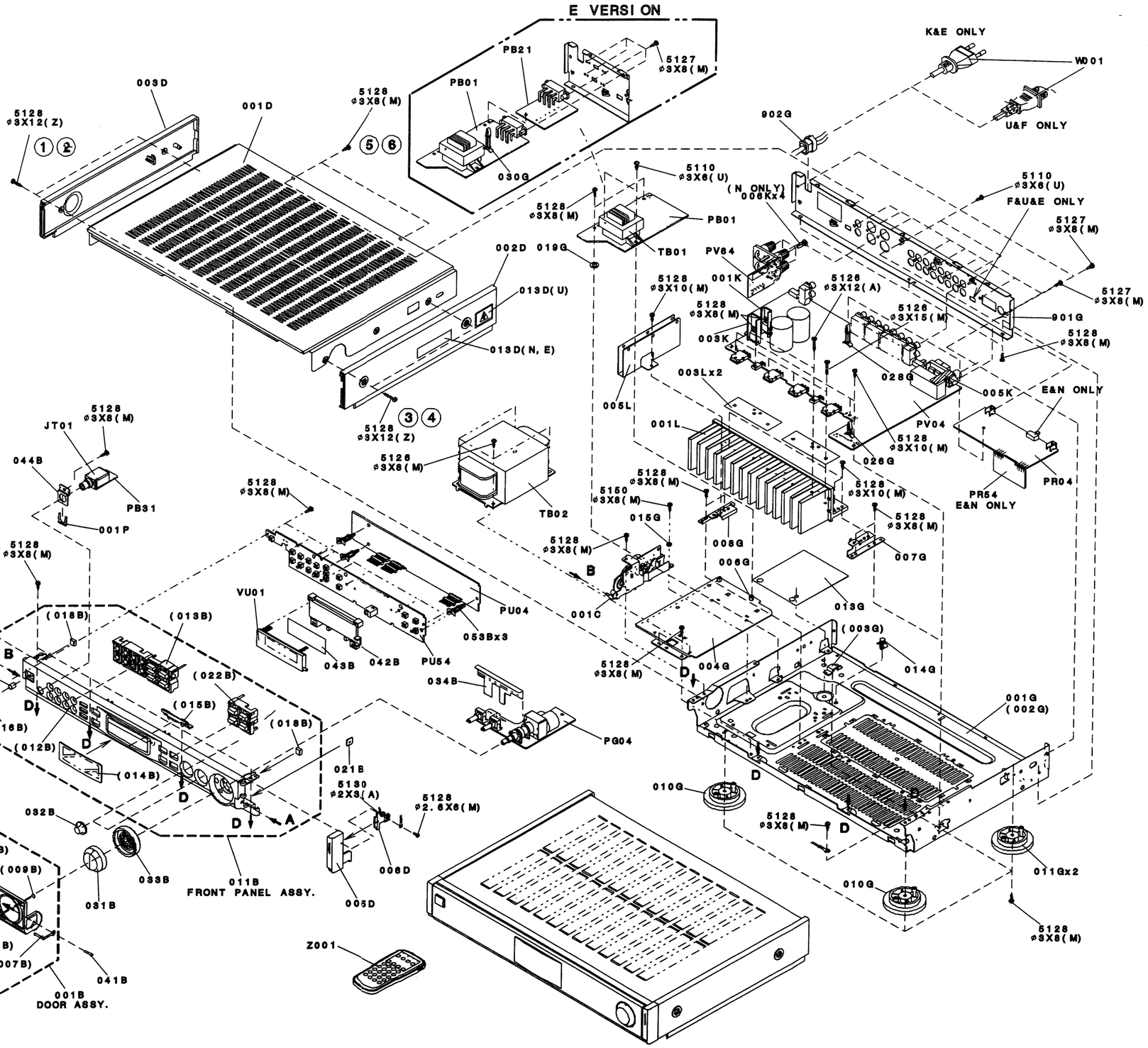
4. EXPLODED VIEW AND PARTS LIST

MARK	VERSIONS
E	/1A/1M
N	/2A/2M
U	USA
F	JAPAN
K	FAR EAST



SYMBOL	STYLE	PARTS NAME
5110		+B. H. M. SCREW
5126		+B. H. TAP TITE SCREW W/WASHER
5127		+B. H. TAP TITE SCREW(W/)
5128		+B. H. TAP TITE SCREW(B TYPE)
5130		+P. H. TAP TITE SCREW(B TYPE)
5150		+F. H. TAP TITE SCREW(B TYPE)
5157		+P. H. TAP TITE SCREW(S TYPE)
5182		+P. H. M. SCREW(MINUTE)

MARK	MATERIAL/ FINISH
(M)	IRON/ COPPER
(U)	IRON/ BLACK
(A)	IRON/ CHROMATE
(Z)	IRON/ BRONZU



アイドリング電流の調整

(1) 電流を投入しない状態で、マスターボリュームを最小の位置にします。
(2) 電流調整用半固定抵抗R719 (Lch)、R720 (Rch) を中央の位置にします。
(3) セメント抵抗R737 (Lch)、R738 (Rch) の両端のピンに、デジタル電圧計を接続します。

※ 電源を投入しアイドリング電流を、下表に従ってR719,R720を調整します。

参考
アイドリング電流調整済みのセットを、冷えた状態から電源投入すると、30秒後に約3.5mV、1分後に約4.5mVに達する。
10分後には平衡状態となり、7mVで安定します。
従って、電源投入後、30秒後～1分以内に調整作業を行なう場合は「4mV」に調整します。同様に1分後～2分以内の場合は「5mV」に、2分後～3分以内の場合は「6mV」に、調整します。
5分後以降は、設定値である「7mV」に調整します。
尚、ヒートラン、エージング後あるいは修理後に調整を行なう場合は、10分間無信号、無負荷、電源投入状態で放置し、その後設定値である「7mV」に調整します。

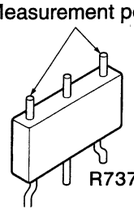
5. IDLING CURRENT ADJUSTMENT

(1) Before switching the power ON, set the Master Volume control to the minimum position and the Balance and Tone controls to the center positions. Then, rotate the semi - fixed resistors R719 (L CH) and R720 (R CH) on the PC board PV04 center positions.
(2) Connect a digital voltmeter, set for the DC voltage input to the pertinent test points (the marked ones of R737-R738) on the PC board PV04.
(3) After the completion of the above setup.
Switch the power ON and adjust the semi - fixed resistors R719 (L CH) and R720 (R CH) on the PC board PV04 according to the reading of the digital voltmeter. The setting values are 7mV (19.4mA) of the both channels.

Note:
When you proceed to this adjustment after serviced the unit, operate the unit with a non-signal condition for about 15 minutes after turning its power ON, then adjust to 7mV.
If you should proceed to the adjustment in less than 15 minutes after turning the power ON, refer to the following table for the value to be adjusted.

Power ON	
30 sec. ~ 1 min.	4.0 mV
1 min. ~ 2 min.	5.0 mV
2 min. ~ 3 min.	6.0 mV
More than 10 min.	7.0mV

Measurement point



R737/R738

サービスプログラム

(1) トラッキングポイントメモリー
「MEMO」「TAPE1」keysを同時押しながら「FM/AM」keyを押します。下表参照(FM: JAPAN, AM: 10kHz)

memoryをclearする場合は
「MEMO」「TAPE1」keysを同時押しながら「AUX」keyを押します。この場合、全てのRAM Dataがclearされます。

(2) FLセグメントチェック
「MEMO」「TAPE1」キーを同時押しながら「P.SCAN」を押します。
all segmentsが点灯します。この時、functionが「TUNER」の場合は約5秒後に消灯し、最左端桁より1桁ずつ順番に点灯します。
「TUNER」以外のfunctionでは、全点灯のままです。
segment check mode中は他の動作は一切しません。
power offでcancelされます。

6. SERVICE PROGRAM

6-1. T.R POINT ME (tracking point memory) mode.
While holding the MEMO and TAPE1 keys depressed simultaneously, press the FM / AM (MW) keys, the T.R POINT ME mode is called. Frequencies to be memorized are as follows.

		P1	P2	P3	P4	P5	P6	P7
FM [MHz]	EUROPE	90	98	106	87.5			
	USA	90	98	106	87.5			
	JAPAN	78	83	88	76.0			
AM [kHz]	9kHz without LW					603	999	1404
	9kHz with LW					603	999	1404
	10 kHz					600	1000	1400

		P8	P9	P10	P11	P12 ~ P30
AM [kHz]	9kHz without LW	-	-	-	-	-
	9kHz with LW	171	207	270	152	531
	10 kHz	-	-	-	-	-

- : Low end frequency of the AM (MW) band.

To clear the entire memory:
While holding the MEMO and TAPE1 keys depressed simultaneously, press the AUX key. This will clear the RAM data entirely.

6-2. FL segment check mode.
While holding the MEMO and TAPE1 keys depressed simultaneously, press the P. SCAN keys.
All of the display segments light up. If the current input function is TUNER, the segments go off in about 5 seconds then the segments of each display digit light one after another starting with the leftmost digit. If the current input function is other than TUNER, all of the segments remain lit.
No other operation occurs during the segment check mode. This mode can be cancelled by turning the power OFF.

7. TUNER ALIGNMENT PROCEDURES

- Set to T.R point ME mode of the service program.
(P2) to (P10) in the Digital Readout Frequency Setting column shows preset numbers for the above mode.
- Before alignment, connect a dummy resistor of 47 kohms to the tape output terminal.

7-1. FM Alignment Procedures

(Band switch at "FM" position and MODE switch at "MONO" position)

FM RF Alignment

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	FM signal generator to FM antenna terminal. Adjust the RF signal output so that slight noise occurs at the upper and lower sides of the output waveform.	98.0 MHz	AC VTVM to L-or R-channel Tape out (JV02)	98.0 MHz (P2)	Front end (A101) IFT for maximum output and minimum distortion.
2	FM signal generator 500 µV output to FM antenna terminal (75-ohm).	98.0 MHz	Distortion meter to L-or R-channel Tape out (JV02)	98.0 MHz (P2)	L201 core for minimum distortion.

FM IF Alignment
(Band switch at "FM" position and MODE switch at "AUTO STEREO" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	FM signal generator 500 µV output modulated by MPX signal generator to FM antenna terminal (75-ohm).	Stereo L-channel (1.000 Hz)	VTVM to L-channel Tape out (JV02 L-channel)	98.0 MHz (P2)	Front end (A101) IFT for minimum distortion.
2	Modulation level: IHF 67.5 kHz +9% pilot dev. DIN 40 kHz +8% pilot dev.	Stereo R-channel (1.000 Hz)	VTVM to R-channel Tape out (JV02 R-channel)		

Muting Level Alignment
(Band switch at "FM" position and MODE switch at "AUTO STEREO" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	FM signal generator 6.3 µV output to FM antenna terminal (75-ohm)	98.0 MHz	AC VTVM to L-or R- channel Tape out (JV02)	98.0 MHz (P2)	R212 to a point at which output appears.

Multiplex Alignment

(Band switch at "FM" position and MODE switch at "AUTO STEREO" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	FM signal generator 500 µV output modulated by MPX signal generator to FM antenna terminal (75-ohm) Modulation level : IHF 67.5 kHz +9% pilot dev. DIN 40 kHz +8% pilot dev.	Stereo L-channel (1.000 Hz)	VTVM to R-channel Tape out (JV02 R-channel)	98.0 MHz (P2)	R211 so that channel separation is identical between both channels.
2		Stereo R-channel (1.000 Hz)	VTVM to L-channel Tape out (JV02 L-channel)		
3	Repeat steps 1 and 2				

RDS 57 kHZ BPF Alignment (Europe only)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	fm signal generator 500 µV output modulated by MPX signal generator to FM antenna terminal (75-ohm). Modulation level: RDS signal 1 kHz dev.	98.0 MHz	AC VM and Oscilloscope between U711 and GND. (PR04)	98.0 MHz	RR06 for maximum output.

7-2. MW (AM) / LW Alignment Procedures

(Band switch at "MW" or "AM" position)

AM IF Alignment

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	Sweep generator to AM antenna terminal.	450 kHz	AC VTVM to L-or R-channel Tape out (JV03)	——	LA06 for maximum and symmetrical waveform.

MW (AM) RF Alignment

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	AM signal generator to AM loop antenna in a test loop.	603 kHz (Europe, Japan) 600 kHz (USA)	VTVM to L-or R-channel Tape out (JV03)	603 kHz 600 kHz (P5)	LA01 for maximum output.
2		1404 kHz (Europe, Japan) 1400 kHz (USA)		1404 kHz 1400 kHz (P7)	CA01 for maximum output.
3	Repeat steps 1 and 2 until sensitivity is maximized.				

AM Auto Stop Alignment (Band switch at "MW" or "AM" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	RF generator to AM loop antenna in a test loop (500 µV / m)	999 kHz (Europe, Japan) 1000 kHz (USA)	——	999 kHz 1000 kHz (P6)	RA11 so that the "TUNED" on the display tube lights.

LW RF Alignment (Europe only)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	AM signal generator to AM loop antenna in a test loop.	173 kHz	VTVM to L-or R-channel Tape out (JV03)	173 kHz (P8)	LA03 for maximum output.
2		272 kHz		272 kHz (P10)	CA08 for maximum output.
3	Repeat steps 1 and 2 until sensitivity is maximized.				

AM Stereo 調整 (Japan only)

調整箇所 : LA51,LA52,LA06

調整周波数 : 999kHz,50mV/m(94dB/m)

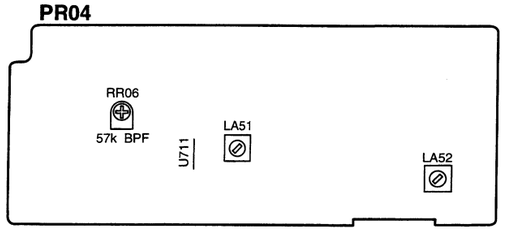
変調条件 : 400Hz (L+R) = 30% MOD.
25Hz PILOT = 5% MOD.

1. SGの変調を「L - R」(SUB), PILOT - OFFにする。
2. セットのLch (又はRch)の出力が最小になるように、LA51, LA52を調整、LA06を微調整する。(注)

※MODE SW は、「AUTO」ポジションとする。

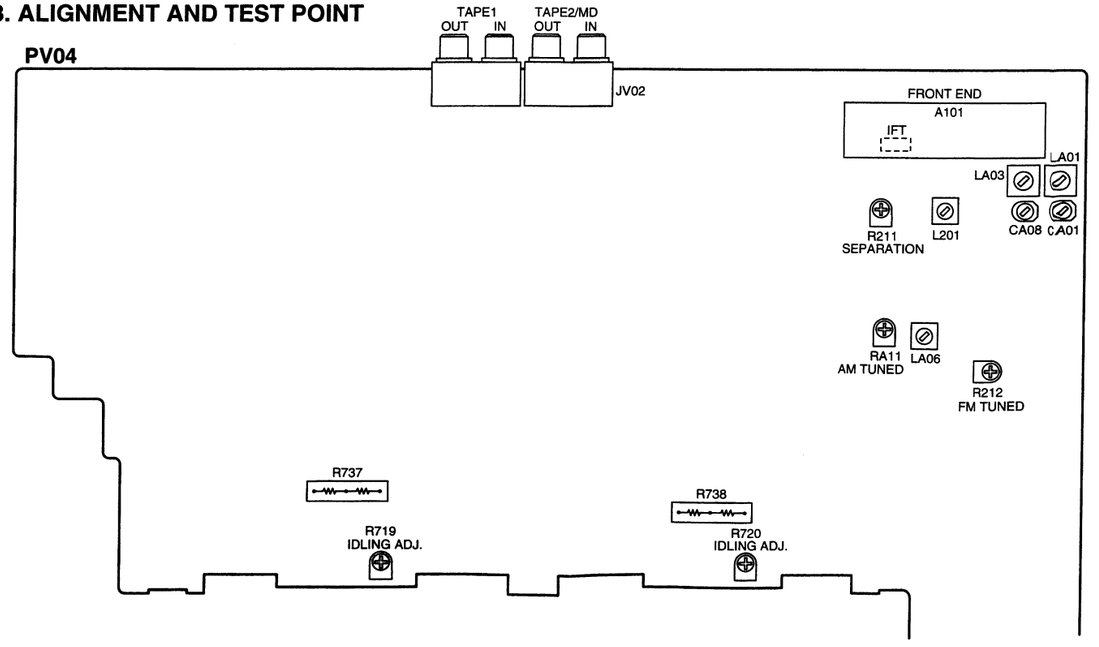
(注) LA52 の調整はブロードであり、セットの出力変化は極僅かです。

PR04



8. ALIGNMENT AND TEST POINT

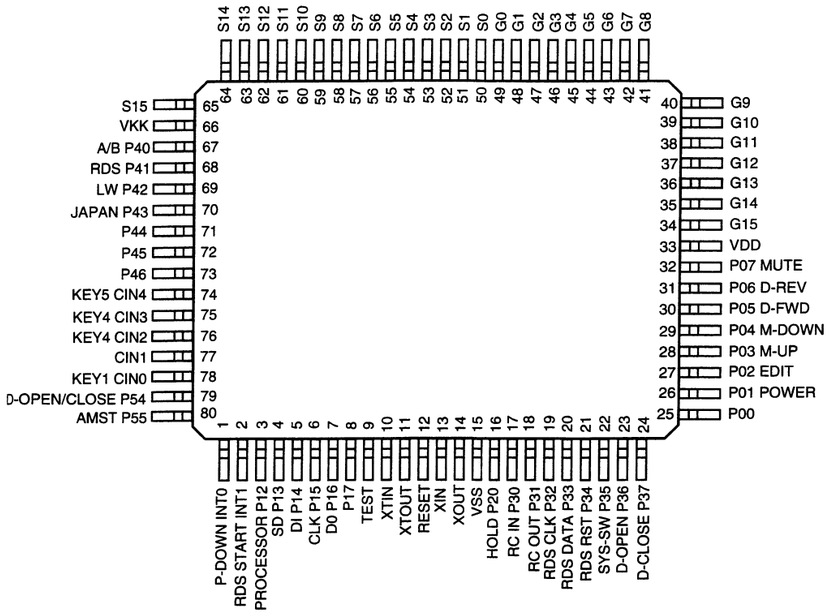
PV04



9. MICROPROCESSOR SPECIFICATIONS

Receiving Frequency Range, Channel Space, Reference Frequency and Intermediate Frequency

		Receiving Frequency	Channel Space	Reference Frequency	Intermediate Frequency
Europe	FM MW LW	87.5 ~ 108.0 MHz 531 ~ 1602 kHz 152 ~ 282 kHz	50 kHz 9 kHz 1 kHz	25 kHz 9 kHz 1 kHz	+10.7 MHz +450 kHz +450 kHz
U.S.A.	FM AM	87.5 ~ 108.0 MHz 520 ~ 1710 kHz	100 kHz 10 kHz	25 kHz 10 kHz	+10.7 MHz +450 kHz
Japan	FM AM	76.0 ~ 90.0 MHz 531 ~ 1602 kHz	100 kHz 9 kHz	25 kHz 9 kHz	-10.7 MHz +450 kHz

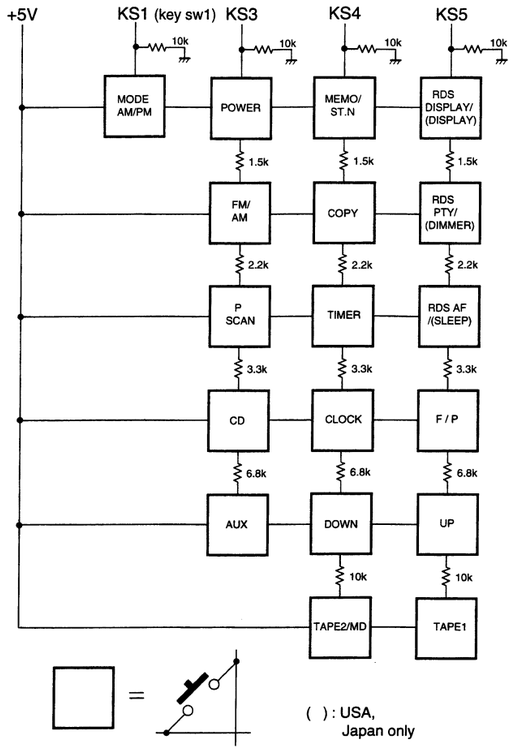


TMP87CK70AF

Pin No.	Pin name		I / O	Action	Function
1	INT0	P-DOWN	I	H	Power down signal
2	INT1	RDS START	I	L	RDS Data start
3	P12	PROCESSOR	I	H	Processor SW
4	P13	SD	I	L	SD in
5	P14	DI	I	H	Di in
6	P15	CLK	0	H	Clock out
7	P16	DO	0	H	Data out
8	P17	CE	0	H	CE out
9	TEST	TEST	I	-	Not used
10	XT in	XT in	I	-	Sub clock,32.768kHz
11	XT out	XT out	0	-	Sub clock
12	RESET	RESET	I	L	Reset
13	X in	X in	I	-	Main clock, 8.0MHz
14	X out	X out	0	-	Main clock
15	Vss	Vss	-	-	GND
16	P20	HOLD	I	H	Hold
17	P30	RC IN	I	H	RC-5 in
18	P31	RC OUT	0	L	RC-5 out
19	P32	RDS CLK	I	L	RDS clock in
20	P33	RDS DATA	I	L	RDS data in
21	P34	RDS RST	0	L	RDS reset out
22	P35	SYS-SW	I	H	System SW
23	P36	D-OPEN	I	L	Door open SW
24	P37	D-CLOSE	I	L	Door close SW
25	P00		0	-	Not used
26	P01	POWER	0	H	Power relay drive
27	P02	EDIT	0	L	Edit
28	P03	M-UP	0	H	Motor volume up
29	P04	M-DOWN	0	H	Motor volume down
30	P05	D-FWD	0	H	Door motor forward
31	P06	D-REV	0	H	Door motor reverse
32	P07	MUTE	0	H	Muting
33	Vdd	Vdd	-	-	+5V
34	G15	G15	0	-	Not used
35	G14	G14	0	-	Not used
36	G13	G13	0	-	Not used
37	G12	G12	0	-	Not used
38	G11	G11	0	-	Not used
39	G10	G10	0	-	Not used
40	G9	G9	0	H	FTD 1G digit

Pin No.	Pin name		I / O	Action	Function
41	G8	G8	0	H	FTD 2G digit
42	G7	G7	0	H	FTD 3G digit
43	G6	G6	0	H	FTD 4G digit
44	G5	G5	0	H	FTD 5G digit
45	G4	G4	0	H	FTD 6G digit
46	G3	G3	0	H	FTD 7G digit
47	G2	G2	0	H	FTD 8G digit
48	G1	G1	0	H	FTD 9G digit
49	G0	G0	0	H	FTD 10G digit
50	S0	S0	0	H	FTD S16 segment
51	S1	S1	0	H	FTD S15 segment
52	S2	S2	0	H	FTD Sr segment
53	S3	S3	0	H	FTD Sp segment
54	S4	S4	0	H	FTD Sn segment
55	S5	S5	0	H	FTD Sm segment
56	S6	S6	0	H	FTD Sk segment
57	S7	S7	0	H	FTD Sj segment
58	S8	S8	0	H	FTD Sh segment
59	S9	S9	0	H	FTD Sd segment
60	S10	S10	0	H	FTD Sc segment
61	S11	S11	0	H	FTD Se segment
62	S12	S12	0	H	FTD Sg segment
63	S13	S13	0	H	FTD Sf segment
64	S14	S14	0	H	FTD Sb segment
65	S15	S15	0	H	FTD Sa segment
66	Vkk	Vkk	-	-	-30V
67	P40	A/B	I	-	MODEL
68	P41	RDS	I	L	RDS
69	P42	LW	I	L	LW
70	P43	JAPAN	I	H	JAPAN
71	P44		0	-	Not used
72	P45		0	-	Not used
73	P46		-	-	Not used
74	CIN4	KEY5	I	-	Key SW 5
75	CIN3	KEY4	I	-	Key SW 4
76	CIN2	KEY3	I	-	Key SW 3
77	CIN1		I	-	Not used
78	CIN0	KEY1	I	-	Key SW 1
79	P54	D-OPEN/ CLOSE	I	L	Door key SW
80	P55	AMST	I	H	AM stereo SELECT

Key Matrix



Description of Keys

※ RDS DISPLAY (DISPLAY) key
This key is used to switch the information shown on the display. It is valid only during tuner reception.
Usually, the display shows the station name but the frequency appears when the key is pressed.
During reception of a station without station name, its frequency is displayed. If this key is pressed then, "NO NAME" will be displayed for about 2 second.

※ RDS PTY (DIMMER) key
This key is used to select the PTY (Programme Type).
When this key is pressed during reception of an RDS station, the PTY of the station being received will be displayed for about 5 seconds. If the UP or DOWN key is pressed after displaying the PTY, the PTY auto search starts and stops only when a station of the same PTY is received.
In case of "without RDS", this key functions as the Dimmer key, which varies (dims) the display brightness when it is pressed.

※RDS AF (SLEEP) key
This key is used to switch the station being received to an AF (Alternative Frequencies) station. When the key is pressed during reception of an RDS station, a station broadcasting the same programme will be received. If there is no AF station to the original station, :NO AF" will be displayed.
In case of "without RDS", this key functions as the Sleep key, which allow to set the sleep timer.

※ F/ P key
This key is used to switch the function of the UP / DOWN keys between the Frequency up / down keys and Preset up / down keys.

※UP / DOWN keys
These keys are used to increase or decrease the frequency or preset number.
In the clock and timer modes, these keys are used to set the time, programme, etc.

※ TAPE1, TAPE2/MD, CD and AUX keys
These keys are used to select the input function.

※ FM / AM keys
This key is used to select the tuner mode and the receiving band.
In case the LW band is available, this key functions as the FM / MW / LW band selector keys.

※P. SCAN key
This key is used to initiate the preset scanning of radio stations.
With preset scanning, the preset stations in memory are received sequentially for 5 seconds per each station.
When this key is pressed again, the preset scanning stops at that point.

※ MODE AM / PM key
This key is usually used as the MODE key for selecting the FM reception mode (Auto stereo / Mono).
In the clock and timer modes, this key functions as the AM / PM selector key.

※ MEMO / ST. N key
This key is usually used as the MEMO key for use in storing preset stations in memory or programming of the clock or timer.
When the key is held depressed for more than 3 seconds, the station name input mode is initiated and this key allows to input the station name manually.

※ COPY key
This key is used to initiate direct recording from TAPE2/MD to TAPE. This key is invalid if D. BUS switch on the rear panel is set to SYSTEM.

※ CLOCK key
This key is used when setting the current time of the day. When this key is pressed while the power is ON, the current time will be displayed for about 3 seconds.

※ TIMER key
This key is used when setting the programme timer or checking the programmed contents.

※ POWER key
This key is used to turn the power ON / OFF. The clock is displayed while the power is OFF.

※ DISPLAY key
DISPLAY部の表示を切換えるKeyです。チューナ受信時のみ有効です。

※ DIMMER key
Keyを押すと表示部の明るさが変化（暗くなる）します。

※ SLEEP key
Sleep key でSleep timerを設定することができます。

※ F/P key
UP/DOWN keysを、Frequency up/down かPreset up/down かに切換えるkeyです。

※ UP/DOWN keys
Frequency Preset number のup/down keyです。
Clock, Timer mode の時には、Time, Programme 等の設定keysになります。

※ TAPE1, TAPE2/MD, CD, AUX keys
Function切換えkeyです。

※ FM/AM key
Tuner選択及び受信Band 切換えるkeyです。

※ P. SCAN key
TunerのPreset scan を行なうkeyです。
Memoryされ ているPreset stationを5秒間ずつ、順番に受信します。
Preset scan中に再度keyを押すとstopします。

※ MODE AM/PM key
FM/AMの受信Mode (Auto stereo / Mono)を切換えるkeyです。
Clock, Timer modeの時には、AM/PM切換えkeyになります。

※ MEMO/ST. N key
TunerのPreset memory やClock, TimerのProgramme等に使用するMemory keyです。
3秒以上押し続けると、Station name input modeになり、manual でstation nameをinputすることができます。

※ COPY key
TAPE2/MDからTAPEに直接、録音する時に使用するkeyです。
Rear panelの「D. BUS」のSwitchが「SYSTEM」に切換えてある時には、無効keyになります。

※ CLOCK key
現時刻を設定する時に使用するkeyです。又、Power on中にkeyを押すと表示部に3秒間現時刻が表示されます。

※ TIMER key
Programme timerの設定やProgramme内容の確認を行なうkeyです。

※ POWER key
Power on/off keyです。Power off時は時計表示となります。

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10. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R＊＊＊ : 1) GD05 x x x 140, Carbon film fixed resistor, ±5% 1/4W
R＊＊＊ : 2) GD05 x x x 160, Carbon film fixed resistor, ±5% 1/6W
① Resistance value

Examples ;
① Resistance value

0.1 Ω 001	10 Ω 100	1k Ω ... 102	100k Ω 104
0.5 Ω 005	18 Ω 180	2.7k Ω ... 272	680k Ω 684
1 Ω 010	100 Ω 101	10k Ω ... 103	1M Ω 105
6.8 Ω 068	390 Ω 391	22k Ω ... 223	4.7M Ω 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C＊＊＊ : CERAMIC CAP.
3) DD1 x x x 370, Ceramic capacitor
Disc type
Temp.coeff. P350~N1000, 50V
③ Capacity value
② Tolerance

Examples
② Tolerance (Capacity deviation)
± 0.25 pF 0
± 0.5 pF 1
± 5 % 5
＊ Tolerance of COMMON PARTS handled here are as follows :
0.5 pF - 5 pF ..... ± 0,25 pF
6 pF - 10 pF ..... ± 0.5 pF
12 pF - 560 pF ... ± 5 %
③ Capacity value

0.5 pF 005	3 pF 030	100 pF 101
1 pF 010	10 pF 100	220 pF 221
1.5 pF 015	47 pF 470	560 pF 561

C＊＊＊ : CERAMIC CAP.
4) DK16 x x x 300, High dielectric constant ceramic capacitor
Disc type
Temp.chara. 2B4, 50V
④ Capacity value

Examples
④ Capacity value

100 pF 101	1000 pF 102	10000 pF 103
470 pF 471	2200 pF 222	

C＊＊＊ : 5) ELECTROLY CAP.(⏚), 6)FILM CAP (⏤)
5) EA x x x x x x 10, Electrolytic capacitor
One-way lead type,Tolerance ±20%
⑥ Working voltage
⑤ Capacity value

Examples
⑤ Capacity value

0.1μF 104	4.7μF 475	100μF 107
0.33μF 334	10μF 106	330μF 337
1μF 105	22μF 226	1100μF 118
		2200μF 228

⑥ Working voltage

6.3 V. . .006	25 V. . .025
10 V. . .010	35 V. . .035
16 V. . .016	50 V. . .050

6) DF15 x x x 350 → Plastic film capacitor
DF15 x x x 310 → One-way type, Mylar ±5% 50V
DF16 x x x 310 → Plastic film capacitor
One-way type, Mylar ±10% 50V
⑦ Capacity value

Examples
⑦ Capacity value

0.001μF (1000pF) 102	0.1μF 104
0.0018μF 182	0.56μF 564
0.01μF 103	1μF 105
0.015μF 153	

NOTE :1) The above CODES(R＊＊＊,R＊＊＊,C＊＊＊,C＊＊＊ and C＊＊＊) are omitted on the schematic diagram in some case.
2) On the occasion, be confirmed the common parts on the parts list.
3) Refer to "Common Parts List" for the other common parts**(RI05, DD4, DK4)**.

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows ;
1 . KOA Corporation

Part No.(MJI)	Type No.(KOA)	Description
NH05 x x x 140	RF25S x x x x Ω J	(±5% 1/4W)
NH05 x x x 120	RF50S x x x x Ω J	(±5% 1/2W)
NH85 x x x 110	RF73B2A x x x x Ω J	(±5% 1/10W)
NH95 x x x 140	RF73B2E x x x x Ω J	(±5% 1/4W)

＊ Resistance value Resistance value(0.1 Ω- 10k Ω)

2. Matsushita Electronic Components Co., Ltd

Part No.(MJI)	Type No.(MEC)	Description
NF05 x x x 140	ERD-2FCJ x x x	(±5% 1/4W)
RF05 x x x 140		
NF02 x x x 140	ERD-2FCG x x x	(±2% 1/4W)
RF02 x x x 140		

＊ Resistance value

Examples :
＊ Resistance value

0.1 Ω 001	10 Ω 100	1k Ω .. 102	100k Ω 104
0.5 Ω 005	18 Ω 180	2.7k Ω .. 272	680k Ω 684
1 Ω 010	100 Ω 101	10k Ω .. 103	1M Ω 105
6.8 Ω 068	390 Ω 391	22k Ω .. 223	4.7M Ω 475

ABBREVIATION AND MARKS

ANT.	: ANTENNA	BATT.	: BATTERY
CAP.	: CAPACITOR	CER.	: CERAMIC
CONN.	: CONNECTING	DIG.	: DIGITAL
HP	: HEADPHONE	MIC.	: MICROPHONE
μ -PRO	: MICROPROCESSOR	REC.	: RECORDING
RES.	: RESISTOR	SPK	: SPEAKER
SW	: SWITCH	TRANSF.	: TRANSFORMER
TRIM.	: TRIMMING	TRS.	: TRANSISTOR
VAR.	: VARIABLE	X ' TAL	: CRYSTAL

NOTE ON SAFETY:

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠ Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意：

⚠ がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

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(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
			PB01-BACKUP TRANSF.	
			CIRCUIT BOARD	
			PB01-CAPACITORS	
⚠CB01		4822 122 33276	CER. 0.1μF ±20%	DK17103840
CB11		4822 122 33639	CER. 1000pF ±10%	DA16102110
CB12		4822 122 33639	CER. 1000pF ±10%	DA16102110
			PB01-CAPACITORS (COMMON)	
C＊＊＊			ELECTROLYTIC CAPACITOR ±20% : CB16 CB17	
			PB01-RESISTORS	
⚠RB11		4822 113 90107	4.7 Ω ±5% 1/4W FUSIBLE	NH05047140
⚠RB19		4822 050 22209	220 Ω ±5% 1/4W	GG05220140
			RB01-RESISTORS (COMMON)	
R＊＊＊			CARBON FILM FIXED RESISTOR ±5% 1/6W : RB16~RB18	
			PB01-SEMICONDUCTORS	
⚠DB11		4822 130 82421	DIODE 1D3 1A 200V	HD20002710
⚠DB13		4822 130 82421	DIODE 1D3 1A 200V	HD20002710
⚠DB14		4822 130 82421	DIODE 1D3 1A 200V	HD20002710
DB16		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
⚠DB17		4822 130 82421	DIODE 1D3 1A 200V	HD20002710
QB16		4822 130 61189	DEG.TRS. DTC114TS UN4215	BA20004000
QB17		4822 130 61441	TRS. 2SD1862 Q R	HT418622A0
			PB01-MISCELLANEOUS	
⚠F001	/2A/2M	4822 070 31252	FUSE 1.25A 125V	FS10125850
⚠F001	F		FUSE 3.15A 125V	FS10315350
⚠LB01		4822 280 10352	RELAY G5P-1 DC12V	LY10120350
⚠TB01	/2A/2M	4822 146 10879	POWER TRASF. 230V	TS14823290
⚠TB01	F		POWER TRASF. 100V	TS17805110
			PB41-HEADPHONE	
			CIRCUIT BOARD	
			PB41-CAPACITORS	
CT01	/2A/2M	4822 122 33639	CER. 1000pF ±10% 50V	DA16102110
CT02	/2A/2M	4822 122 33639	CER. 1000pF ±10% 50V	DA16102110
CT03	/2A/2M	4822 122 33639	CER. 1000pF ±10% 50V	DA16102110
			PB41-MISCELLANEOUS	
JB32		4822 267 31685	JACK HEADPHONE	YJ01003900
			PG04-MOTOR VR TONE	
			CIRCUIT BOARD	
			PG04-CAPACITORS	
CE01	/2A/2M	4822 126 10408	CER. 220pF ±10%	DA16221110
CE02	/2A/2M	4822 126 10408	CER. 220pF ±10%	DA16221110
CE09		4822 124 23056	ELECT 47μF 16V	EJ47601610
CE10		4822 124 23056	ELECT 47μF 16V	EJ47601610
CE15		4822 124 23055	ELECT 22μF 16V	EJ22601610
CE16		4822 124 23055	ELECT 22μF 16V	EJ22601610
CE17 ∫ CE20		4822 124 21894	ELECT 10μF 16V	EJ10601610
CG01		4822 122 30103	CER. 0.022μF +80% -20% 50V	DK18223310
CG05		4822 124 23052	ELECT 100μF 16V	EJ10701610
			PG04-CAPACITORS (COMMON)	
C＊＊＊			PLASTIC FILM CAPACITOR ±5% 50V : CE05~CE08 CE11~CE14	
			PG04-RESISTORS	
RE01		4822 052 10151	150 Ω ±5% 1/6W	GG05151160
RE01		4822 052 10151	150 Ω ±5% 1/6W	GG05151160
RE19		4822 101 30834	10 kΩ E VARIABLE	RM01030900
RE20		4822 101 30834	10 kΩ E VARIABLE	RM01030900
RG01		4822 101 30835	100 kΩ A x 2 100 kΩ B VAR.	RY01040240
			RG04-RESISTORS (COMMON)	
R＊＊＊			CARBON FILM FIXED RESISTOR ±5% 1/6W : RE05~RE18 RE21~RE24 RG03 RG04	
			PG04-SEMICONDUCTORS	
DE01		4822 130 32508	DIODE RL103E DSF10C	HD20003000
QE01		4822 209 73064	IC NJM2068DD	HC10053090
QE02		4822 130 61227	DIG.TRS. DTA114ES UN4111	BA10001000
			PG04-MISCELLANEOUS	
LE01		4822 280 20501	RELAY MR62-24SR	LY20240410
			PR04-RDS/AM STEREO	
			CIRCUIT BOARD	
			PR04-CAPACITORS	
CA53	F		ELECT 10μF 16V	EJ10601610
CA54	F		ELECT 10μF 16V	EJ10601610
CA56	F		CER. 0.022μF +80%- 20% 50V	DK18223310
CA64	F		ELECT 10μF 16V	EJ10601610
CA66	F		CER. 0.01μF ±20%	DA17103110
CA67	F		CER. 51pF ±5% 50V	DD15510300
CA68	F		ELECT 1μF 50V	EJ10505010
CA69	F		ELECT 22μF 16V	EJ22601610
CA70	F		ELECT 47μF 16V	EJ47601610
CA75	F		ELECT 0.1μF 50V	EJ10405010
CA76	F		ELECT 0.1μF 50V	EJ10405010
CA78	F			
CA79 ∫ CA82	F		CER. 0.01μF ±20%	DA17103110
CR01	/2A/2M	4822 126 10935	ELECT 100μF 6.3V	EJ10700610
CR02	/2A/2M	4822 124 21894	ELECT 10μF 16V	EJ10601610
CR05	/2A/2M	4822 122 40586	CER. 0.01μF ±20% 25V	DA17103110
CR06	/2A/2M	4822 122 40586	CER. 0.01μF ±20% 25V	DA17103110
CR07	/2A/2M	4822 124 21894	ELECT 10μF 16V	EJ10601610
CR08	/2A/2M	4822 124 21894	ELECT 10μF 16V	EJ10601610
CR09	/2A/2M	4822 124 23057	ELECT 4.7μF 50V	EJ47505010
CR10	/2A/2M	4822 124 21894	ELECT 10μF 16V	EJ10601610
CR11	/2A/2M	4822 122 30103	CER. 0.022μF +80% -20% 50V	DK18223310
CR15	/2A/2M	4822 122 40586	CER. 0.01μF ±20% 25V	DA17103110

(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
			PR04-CAPACITORS (COMMON)	
C***			HIGH DIELECTRIC CONSTANT CERAMIC CAPACITOR ±10% 50V: (CA51 CA55 CA57~CA62 CA71~CA73 [F]) (CR03 CR04 CR12~CR14 [/2A/2M])	
C***			PLASTIC FILM CAPACITOR ±5% 50V : (CA63 CA65[F])	
			PR04-RESISTORS	
RR06	/2A/2M	4822 100 11373	4.7 kΩ TRIMMING	RA04720780
RR10	/2A/2M	4822 116 83929	220 Ω ±5%1/4W	GG05221140
			PR04-RESISTORS (COMMON)	
R***			CARBON FILM FIXED RESISTOR ±5% 1/6W : (RA51 RA53~RA67 RA69~RA77[F]) (RR01~RR05 RR07~RR09 [/2A/2M])	
			PR04-SEMICONDUCTORS	
DR01	/2A/2M	4822 130 80317	ZENER DIODE RD5.1JB2/MTZJ5.1B	HD30511000
QA51	F		IC MC13022P	HC10078170
QA52	F		TRS. 2SC536SP 2SC2458 2SC3311 2SC1740S	HT30001000
QA53	F		DIG.TRS. DTC144ES UN4213	BA20002000
QA54	F		DIG.TRS. DTA144ES UN4113	BA10002000
QA55	F		DIG.TRS. DTC144ES UN4213	BA20002000
QA56	F		DIG.TRS. DTA144ES UN4113	BA10002000
QR01	/2A/2M	4822 209 32706	IC LA2232 RDS	HC10315030
QR02	/2A/2M	4822 209 33818	IC LC7073 RDS	HC10333030
			PR04-MISCELLANEOUS	
JA51	F		PLUG 9P	YP06006690
LA51	F		I.F.T. COIL	LI71010120
LA51	F		I.F.T. COIL	LI70033510
SV51	/2A/2M	4822 277 21712	SLIDE SW ON OFF	SS02021470
XA51	F		CER. RESONATOR 3.60MHz	FQ03604020
XR01		4822 242 81608	CER. RESONATOR 4.56MHz	FQ04563040
XR02		4822 242 72527	CER. RESONATOR 4.00MHz	FQ04004030
			PU04-FRONT ETC CIRCUIT BOARD	
			PU04-CAPACITORS	
CU01		4822 126 10935	ELECT 100µF 6.3V	EJ10700610
CU02		4822 124 23295	BIG. ELECT 0.022F	EX22300510
CU05		4822 126 12867	ELECT 1000µF 6.3V	OA108006Q0
CU12		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
CU51		4822 124 23056	ELECT 47µF 16V	EJ47601610
CU52		4822 126 10408	CER. 220pF ±10% 25V	DA16221110
CU53		4822 124 23057	ELECT 4.7µF 50V	EJ47505010
			PU04-CAPACITORS (COMMON)	
C***			PLASTIC FILM CAPACITORS ±5% 50V : CU10	
			PU04-RESISTORS	
RU03		4822 050 23308	3.3MΩ ±5% 1/6W	GG05335160
RU05		4822 050 23308	3.3MΩ ±5% 1/6W	GG05335160
RU08		4822 050 23308	3.3MΩ ±5% 1/6W	GG05335160

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
			PU04-RESISTORS (COMMON)	
R***			CARABON FILM FIXED RESISTOR ±5% 1/6W : RU01 RU02 RU04 RU06 RU09 RU51~RU57 RU61	
			PU04-SEMICONDUCTORS	
DU01 ∫ DU04		4822 130 32362	DIODE 1SS176 MA165 1SS254 30AV 0.1A	HD20002000
DU06 ∫ DU09		4822 130 32362	DIODE 1SS176 MA165 1SS254 30AV 0.1A	HD20002000
DU51 ∫ DU55		4822 130 32362	DIODE 1SS176 MA165 1SS254 30AV 0.1A	HD20002000
QU02		4822 130 42715	TRS. 2SA608SP 2SA1048 2SA13092SA933S	HT10001000
QU03		4822 130 61892	TRS. 2SD2144S U V	HT421442A0
QU04		4822 130 61189	DIG.TRS. DTC114TS	BA20017210
QU05		4822 130 61187	DIG.TRS. DTA144TS	BA10009210
QU06		4822 130 42682	DIG.TRS. DTA144ES UN4113	BA10002000
QU07		4822 130 42682	DIG.TRS. DTA144ES UN4113	BA10002000
QU08		4822 130 42594	DIG.TRS. DTC144ES UN4213	BA20002000
QU09		4822 130 42594	DIG.TRS. DTC144ES UN4213	BA20002000
QU10		4822 130 42682	DIG.TRS. DTA144ES UN4113	BA10002000
QU51		4822 209 63468	IC NJM082D	HC10066090
QU53		4822 130 60588	DIG.TRS. DTC114ES UN4211	BA20001000
			PU04-MISCELLANEOUS	
XU02		4822 242 72236	CRYSTAL 32.768KHz	XO0010O1T0
			PU54-FL / µ-COM / TACT SW CIRCUIT BOARD	
			PU54-CAPACITORS	
CU03		4822 126 10935	ELECT 100µF 6.3V	EJ10700610
CU04		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
CU06		4822 122 31823	CER. 15pF ±5% 50V	DD15150300
CU07		4822 122 31823	CER. 15pF ±5% 50V	DD15150300
CU08		4822 122 40617	CER. 0.1µF +80% -20%	DD38104010
CU09		4822 124 80087	ELECT 220µF 6.3V	EJ22700610
CU11		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
CU15		4822 126 11558	CER. 0.1µF ±20%	DA17104110
			PU54-RESISTORS	
GU01		4822 111 92205	10 kΩ ×4 ARRAY	BW05103250
GU02		4822 111 92204	10 kΩ ×5 ARRAY	BW05103240
GU03		4822 111 92205	10 kΩ ×4 ARRAY	BW05103250
			PU54-RESISTORS (COMMON)	
R***			CARABON FILM FIXED RESISTOR ±5% 1/6W : RU07 RU10 RU14~RU28,RU30 (RU12 RU13 RU29 [F])	
			PU54-SEMICONDUCTORS	
QU01		4822 209 15871	µ-PRO TMP87CK70AF	HU226JT040
QU12		4822 130 83519	IR RECIVER RPM-670CBR	HW10001210
			PU54-MISCELLANEOUS	
SU01 ∫ SU18		4822 276 20508	PUSH SW TACT	SP01011280
VU01		4822 130 91418	DISPLAY UNIT 10GRD 16EG	HQ31003410
XU01		4822 242 72066	CER. RESOMNATOR 8.0MHz	FQ08004010

(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
			PV04-MAIN FUNCTION CIRCUIT BOARD	
			PV04-CAPACITORS	
CA01		4822 125 50384	TRIMMING 20pF	CT12000200
CA02		4822 122 40589	CER. 0.047µF ±20% 25V	DA17473110
CA03		4822 126 11553	CER. 15pF ±5%	DA15150120
CA04		4822 121 42466	FILM 390pF ±5% 100V	DF15391550
CA05		4822 126 10513	CER. 47pF ±5%	DA15470110
CA06		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
CA07	/2A/2M	4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
CA08	/2A/2M	4822 125 50384	TRIMMING 20F	CT12000200
CA09	/2A/2M	4822 126 11553	CER. 15pF ±5%	DA15150120
CA11	/2A/2M	4822 122 31349	CER. 68pF ±5% 50V	DD15680300
CA12	/2A/2M	4822 122 10367	CER. 150pF ±5% 50V	DD15151300
CA13	/2A/2M	4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
CA18		4822 124 21894	ELECT 10µF 16V	EJ10601610
CD01		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
CD02		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
CD04				
∫		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
CD08				
CD09		4822 124 23052	ELECT 100µF 16V	EJ10701610
CD11		4822 124 23052	ELECT 100µF 16V	EJ10701610
CN01		4822 124 22571	ELECT 10µF 50V	OA10605020
CN02		4822 124 40786	ELECT 2.2µF 50V	EJ22505010
CN03		4822 124 23056	ELECT 47µF 16V	EJ47601610
CN04		4822 124 23056	ELECT 47µF 16V	EJ47601610
CN05		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
CN06		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
CV05				
∫	/2A/2M	4822 126 10408	CER. 220pF ±10% 25V	DA16221110
CV16				
CV17		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
CV18	/2A/2M	4822 126 10408	CER. 220pF ±10% 50V	DA16221110
CV19		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
CV20	/2A/2M	4822 126 10408	CER. 220pF ±10% 50V	DA16221110
CV21				
∫		4822 124 21894	ELECT 10µF 16V	EJ10601610
CV26				
CV27		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
CV28		4822 122 40617	CER. 0.1µF +80% -20% 50V	DD38104010
C201		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
C202		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
C203		4822 122 40589	CER. 0.047µF ±20% 25V	DA17473110
C204		4822 124 21894	ELECT 10µF 16V	EJ10601610
C205		4822 122 40589	CER. 0.047µF ±20% 25V	DA17473110
C206		4822 124 21982	ELECT 3.3µF 50V	EJ33505010
C207		4822 124 23052	ELECT 100µF 16V	EJ10701610
C208		4822 122 40589	CER. 0.047µF ±20% 25V	DA17473110
C209		4822 124 23053	ELECT 1µF 50V	EJ10505010
C210		5322 122 32072	CER. 33pF ±5% 50V	DD15330300
C211		4822 124 23053	ELECT 1µF 50V	EJ10505010
C212		4822 124 41604	ELECT 0.1µF 50V	EJ10405010
C213		4822 124 23054	ELECT 0.47µF 50V	EJ47405010
C214	/2A/2M	4822 124 23057	ELECT 4.7µF 50V	EJ47505010
C214	F		ELECT 3.3µF 50V	EJ33505010
C215		4822 122 40589	CER. 0.047µF +80% -20% 25V	DA17473110
C217		5322 122 32143	CER. 22pF ±5%	DD15220300
C218		4822 124 23052	ELECT 100µF 16V	EJ10701610
C301		4822 124 21982	ELECT 3.3µF 50V	EJ33505010
C302		4822 124 [illegible]82	ELECT 3.3µF 50V	EJ33505010

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
C305		4822 124 21982	ELECT 3.3µF 50V	EJ33505010
C306		4822 124 21982	ELECT 3.3µF 50V	EJ33505010
C307		4822 124 21894	ELECT 10µF 16V	EJ10601610
C308		4822 124 21894	ELECT 10µF 16V	EJ10601610
C501		4822 126 10513	CER. 47µF ±5%	DA15470110
C502		4822 126 10513	CER. 47µF ±5%	DA15470110
C503		4822 124 23052	ELECT 100µF 16V	EJ10701610
C504		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
C505		4822 124 23053	ELECT 1µF 50V	OA10505010
C506		4822 124 41604	ELECT 0.1µF 50V	OA10405010
C507		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
C508		4822 124 23052	ELECT 100µF 16V	EJ10701610
C509		5322 122 32265	CER. 100pF ±5% 500V	DD15101560
C510		5322 122 32265	CER. 100pF ±5% 500V	DD15101560
C511		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
C512		4822 122 40586	CER. 0.01µF ±20% 25V	DA17103110
C701		4822 124 23057	ELECT 4.7µF 50V	EJ47505010
C702		4822 124 23057	ELECT 4.7µF 50V	EJ47505010
C705		5322 122 32072	CER. 33pF ±5% 50V	DD15330300
C706		5322 122 32072	CER. 33pF ±5% 50V	DD15330300
C707		4822 124 22571	ELECT 10µF 50V	OA10605020
C708		4822 124 22571	ELECT 10µF 50V	OA10605020
C711		4822 126 10797	CER. 10pF ±0.5pF 500V	DD11100560
C712		4822 126 10797	CER. 10pF ±0.5pF 500V	DD11100560
C713		4822 122 40103	CER. 5pF ±0.25pF 50V	DD10050300
C714		4822 122 40103	CER. 5pF ±0.25pF 50V	DD10050300
C717				
∫		5322 122 32265	CER. 100pF ±5% 500V	DD15101560
C720				
C721				
∫		4822 124 21895	ELECT 0.22µF 50V	EJ22405010
C724				
C725		4822 124 23052	ELECT 100 µF 16V	EJ10701610
C726		4822 124 22571	ELECT 10 µF 50V	OA10605020
C735	/2A/2M	4822 122 30043	CER. 0.01µF +80% -20% 50V	DK18103310
C803		4822 124 22695	ELECT 2200µF 35V	OA22803520
C805		4822 124 21894	ELECT 10µF 16V	EJ10601610
C806		4822 124 23057	ELECT 4.7µF 50V	EJ47505010
C807		4822 124 21894	ELECT 10µF 16V	EJ10601610
C808		4822 124 23056	ELECT 47µF 16V	EJ47601610
C809		4822 124 22571	ELECT 10µF 50V	OA10605020
▲ C811		4822 126 12453	CER. 0.01µF +80% -20% 500V	DK18103560
▲ C812		4822 126 12866	ELECT 4700µF 50V	EB47805040
▲ C813		4822 126 12866	ELECT 4700µF 50V	EB47805040
C814		4822 122 40589	CER. 0.047µF ±20% 50V	DA17473110
C815		4822 122 40589	CER. 0.047µF ±20% 50V	DA17473110
			PV01-CAPACITORS (COMMON)	
C***			PLASTIC FILM CAPACITOR ±5% 50V : CA15 (CA16 CA17 [/2A/2M]) C303 C304	
C***			HIGH DIELECTRIC CONSTANT CERAMIC CAPACITOR ±10% 50V : (CV01~CV04 CV29 CV30 [/2A/2M])C703 C704 C709 C710	
C***			ELECTROLYTIC CAPACITOR ±20%: C727 C728 C804 C817	

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POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
			PV04-RESISTORS	
RA11		4822 100 11351	10 kΩ TRIMMING	RA01030780
▲RD06		4822 111 90967	4.7 Ω ±5%1/6W FUSE	NF05047140
▲RN19		4822 053 11271	270 Ω ±5% 2W	GA05271020
▲RN20		4822 053 11222	2.2 kΩ ±5% 2W	GA05222020
▲RN22		4822 053 11271	270 Ω ±5% 2W	GA05271020
▲RV37		4822 052 10151	150 Ω ±5% 1/6W	GG05151160
▲RV38		4822 052 10151	150 Ω ±5% 1/6W	GG05151160
▲R207		4822 050 21021	100 Ω ±5% 1/4W	GG05101140
R211		4822 100 11373	4.7 kΩ TRIMMING	RA04720780
R212		4822 100 11352	22 kΩ TRIMMING	RA02230780
▲R313		4822 052 10151	150 Ω ±5% 1/6W	GG05151160
▲R314		4822 052 10151	150 Ω ±5% 1/6W	GG05151160
▲R512		4822 052 10221	220 Ω ±5% 1/6W	GG05221160
▲R713		4822 050 26809	68 Ω ±5% 1/6W	GG05680160
▲R714		4822 050 26809	68 Ω ±5% 1/6W	GG05680160
R719		4822 100 11386	1 kΩ TRIMMING	RA01020780
R720		4822 100 11386	1 kΩ TRIMMING	RA01020780
▲R725 ∫ ▲R730		4822 050 26809	68 Ω ±5% 1/6W	GG05680160
▲R731		4822 053 10221	220 Ω ±5% 1W	GA05221010
▲R732		4822 053 10221	220 Ω ±5% 1W	GA05221010
▲R733 ∫ ▲R736		4822 052 10109	10 Ω ±5% 1/6W	GG05100160
▲R737		4822 116 82049	0.18 Ω x 2 3W ARRAY	BZ10182010
▲R738		4822 116 82049	0.18 Ω x 2 3W ARRAY	BZ10182010
▲R739		4822 050 26809	68 Ω ±5% 1/6W	GG05680160
▲R740		4822 050 26809	68 Ω ±5% 1/6W	GG05680160
▲R743		4822 053 11109	10 Ω ±5% 2W	GA05100020
▲R744		4822 053 11109	10 Ω ±5% 2W	GA05100020
▲R745		4822 053 10332	3.3 kΩ ±5% 1W	GA05332010
▲R747		4822 052 10221	220 Ω ±5% 1/6W	GG05221160
▲R748		4822 052 10221	220 Ω ±5% 1/6W	GG05221160
▲R751		4822 053 10331	330 Ω ±5% 1W	GA05331010
▲R752		4822 053 10331	330 Ω ±5% 1W	GA05331010
▲R801		4822 117 10158	1 Ω ±5% 1/4W	GG05010140
▲R802		4822 117 10158	1 Ω ±5% 1/4W	GG05010140
▲R808		4822 117 10002	2.2 kΩ ±5% 1/2W	GG05222120
▲R809		4822 053 10221	220 Ω ±5% 1W	GA05221010
▲R810		4822 053 11688	6.8 Ω ±5% 2W	GA05068020
R***			**PV04-RESISTORS (COMMON)** CARBON FILM FIXED RESISTOR ±5% 1/6W : RA01 RA02 (RA03 RA04 RA06~RA10 [/2A/2M]) RD01~RD04 RN01~RN18 RN21 RN31 RN32 RV01~RV36 RV41 RV42 RV45 RV46 R202~R206 R208~R210 R215 R216 (R217 [/2A/2M]) (R218 [F]) R301 R302 R305~R312 (R315 R316 [F]) R501~R507 R509~R511 R703~R712 R715~R718 R721~R724R746 R753 R804~R806	

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
			PV04-SEMICONDUCTORS	
DA01		4822 125 50416	VARICAP SVC342K	HD40009030
DA02	/2A/2M	4822 130 33697	DIODE 1SS135	HD20017210
DA03	/2A/2M	4822 125 50416	VARICAP SVC342K	HD40009030
DA04	/2A/2M	4822 130 33697	DIODE 1SS135	HD20017210
DA05		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
DA06		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
DD01		4822 130 82609	ZENER DIODE MTZJ2.0B	HD30201000
DD02		4822 130 33759	ZENER DIODE RD4.7JB2 MTZJ4.7B	HD30471000
DN01		4822 130 80837	DIODE HSS81	HD20027010
DN02		4822 130 80837	DIODE HSS81	HD20027010
DN04		4822 130 32508	DIODE RL103E DSF10C	HD20003000
DN05		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D501		4822 130 80317	ZENER DIODE RD5.1JB2 MTZJ5.1B	HD30511000
D701		4822 130 80273	ZENER DIODE RD8.2JB2 MTZJ8.2C	HD30821000
D702		4822 130 80322	ZENER DIODE RD15JB3 MTZJ16A	HD31501000
D703 ∫ D706		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
▲D801 ∫ ▲D806		4822 130 32508	DIODE RL103E DSF10C	HD20003000
D807		4822 130 80838	ZENER DIODE RD18JB2 MTZJ18C	HD31801000
D809		4822 130 80091	ZENER DIODE RD12JB2 MTZJ12C	HD31201000
▲D811		4822 130 31007	DIODE S4VB20	HE20015290
QA01	/2A/2M	4822 130 42298	TRS. 2SC536SP 2SC2458 2SC3311 2SC1740S	HT30001000
QA02	/2A/2M	4822 130 42298	TRS. 2SC536SP 2SC2458 2SC3311 2SC1740S	HT30001000
QA03	/2A/2M	4822 130 61892	TRS. 2SD2144S U V	HT421442A0
QA04	/2A/2M	4822 130 61227	DIG.TRS. DTA114ES UN4111	BA10001000
QA05	/2A/2M	4822 130 61227	DIG.TRS. DTA114ES UN4111	BA10001000
QD01		4822 209 30193	IC LB1641 DRIVER	HC10279030
QD02		4822 209 30193	IC LB1641 DRIVER	HC10279030
QN01		4822 130 43233	TRS. 2SC2240	HT322402A0
QN02		4822 130 43233	TRS. 2SC2240	HT322402A0
QN03		4822 130 42949	TRS. 2SA970	HT109702A0
QN04		4822 209 83312	IC TA7317P	HC10042050
QN05		4822 130 60588	DIG.TRS. DTC114ES UN4211	BA20001000
QV01		4822 209 32552	IC LC78211	HC10308030
QV03		4822 130 60588	DIG.TRS. DTC114ES UN4211	BA20001000
QV04		4822 130 61227	DIG.TRS. DTA114ES UN4111	BA10001000
QV05		4822 130 61892	TRS. 2SD2144S U V	HT421442A0
QV06		4822 130 61892	TRS. 2SD2144S U V	HT421442A0
QV07		4822 209 83631	IC NJM4588DD	HC10008090
Q201		4822 209 31001	IC LA1851N	HC10288030
Q202		4822 130 62294	TRS. 2SC1809S P	HT318091P0
Q203		4822 130 61227	DIG.TRS. DTA114ES UN4111	BA10001000
Q204		4822 130 61227	DIG.TRS. DTA114ES UN4111	BA10001000
Q205		4822 126 90006	VARISTOR PTH59F04BH222TS	HP00016230
Q206	/2A/2M	4822 130 42298	TRS. 2SC536SP 2SC2458 2SC3311 2SC1740S	HT30001000

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POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
Q301		4822 209 83631	IC NJM4588DD	HC10008090
Q303	F		DIG.TRS. DTC114ES UN4211	BA20001000
Q303	F		DIG.TRS. DTA114ES UN4111	BA10001000
Q305	F		TRS. 2SD2144 U V	HT421442A0
Q306	F		TRS. 2SD2144 U V	HT421442A0
Q501		4822 209 30178	IC LC7218 PLL	HC10221030
Q502		4822 130 42121	F.E.T. 2SK30A	HF200300B0
Q503		4822 130 42298	TRS. 2SC536SP 2SC2458 2SC3311 2SC1740P	HT30001000
▲Q701		4822 130 42949	TRS. 2SA970 GR BL	HT109702A0
▲Q702		4822 130 42949	TRS. 2SA970 GR BL	HT109702A0
▲Q703		4822 130 43233	TRS. 2SC2240	HT322402A0
▲Q704		4822 130 43233	TRS. 2SC2240	HT322402A0
▲Q705		4822 130 60117	TRS. 2SC3419 Y	HT334191Y0
▲Q706		4822 130 60117	TRS. 2SC3419 Y	HT334191Y0
▲Q707		4822 130 62335	TRS. 2SD2033 E	HT420331E0
▲Q708		4822 130 62335	TRS. 2SD2033 E	HT420331E0
▲Q709		4822 130 62334	TRS. 2SB1353 E	HT213531E0
▲Q710		4822 130 62334	TRS. 2SB1353 E	HT213531E0
▲Q711		4822 130 11033	TRS. 2SC5196 R O	HT351962A0
▲Q712		4822 130 11033	TRS. 2SC5196 R O	HT351962A0
▲Q713		4822 130 11034	TRS. 2SA1939 R O	HT119392A0
▲Q714		4822 130 11034	TRS. 2SA1939 R O	HT119392A0
▲Q717		4822 209 83732	IC AN7062 V-AMP	HC10066020
▲Q801		4822 209 60826	IC NJM7812FA	HC38912090
▲Q802		4822 209 32514	IC L78MR06	HC10263030
			PV04-MISCELLANEOUS	
A101	/2A/2M	4822 210 10567	FM FRONT END FE417-G02	AV01202230
A101	F		FM FRONT END FE337-J05	AV01201090
FA01		4822 242 81262	CERAMIC FILTER SFP450F	FF10045390
F201	/2A/2M	4822 242 70665	CERAMIC FILTER SFE10.7MS3-A	FF11070620
F201	F		CERAMIC FILTER SFE10.7MA8-A	FF11070610
F202		4822 242 70665	CERAMIC FILTER SFE10.7MS3-A	FF11070620
JV01		4822 267 31451	TERMINAL 8P RCA PIN JACK	YT02080110
JV02		4822 267 31451	TERMINAL 8P RCA PIN JACK	YT02080110
JV03		4822 267 41009	TERMINAL 2P RCA JACK	YT02020890
J101	/2A/2M	4822 290 81632	TERMINAL ANT	YT03030020
J101	F		TERMINAL ANT	YT01030080
LA01		4822 157 63084	ANT COIL MW	LA10295170
LA02		4822 157 70779	OSC.COIL MW	LO70013010
LA03	/2A/2M	4822 157 52714	ANT COIL LW	LA10295160
LA04	/2A/2M	4822 157 70781	OSC.COIL LW	LO70013020
LA05		4822 157 53589	CHOKE COIL	LC23960710
LA06		4822 148 81095	I.F.T. COIL AM	LI70033510
LN02		4822 280 20501	RELAY SRV-24A	LY20240400
L201		4822 157 63904	I.F.T. COIL	LI70376010
L202		4822 156 10794	M.P.X. COIL	LS10295030
L301		4822 157 70021	M.P.X. COIL 19.38KHz	LS10293010
L302		4822 157 70021	M.P.X. COIL 19.38KHz	LS10293010
L701		4822 157 70022	AIR COIL SPK CHOCK	ML08010030
L702		4822 157 70022	AIR COIL SPK CHOCK	ML08010030
R103		4822 526 10584	FERRITE CORE	FC90090010

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
SV01		4822 277 21718	SLIDE SW INT EXT	SS02030560
S301	F		SLIDE SW SCAN STEP PROC	SS02021470
X201		4822 242 81608	CER. RESONATOR 4.56MHz	FQ04563040
X501		4822 242 72333	CRYSTAL, 7.2MHz	JX07001260
			PV64-SPK TERMINAL CIRCUIT BOARD	
C729	/2A/2M	4822 122 30043	CER.CAP. 0.1µF +80% -20%	DK18103310
C730	/2A/2M	4822 122 30043	CER.CAP. 0.1µF +80% -20%	DK18103310
C733	/2A/2M	4822 122 30043	CER.CAP. 0.1µF +80% -20%	DK18103310
C734	/2A/2M	4822 122 30043	CER.CAP. 0.1µF +80% -20%	DK18103310
DN03		4822 130 32508	DIODE RL103E/DSF10C	HD20003000
J701		4822 290 81646	TERMINAL 4P SPK	YT01040640
LN01		4822 280 70354	RELAY VB24MBU	LY20240310
R103		4822 526 10584	FERRITE CORE	FC90090010